



U.S. Department
of Transportation
**Federal Aviation
Administration**



SDR

Summary

Service Difficulty Reporting

March 8, 1998 - March 14, 1998

GENERAL AVIATION, ZAC-327

You can improve Air Safety by reporting the problem when you see it!

SECTION

- I Significant Occurrence Report
- II Domestic Service Difficulty Report
- III International Service Difficulty Report
- IV SDR Totals by District Office
- V Index By Aircraft Make and Model
- VI Joint Aircraft System/Component Code Table

ISSUE: 98-11



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SDR SUMMARY

General Aviation, ZAC-327



This summary includes domestic (United States) Service Difficulty Reports (SDRs) entered into the data base for aircraft weighing 12,500 lbs. and below. It also includes reports on aeronautical products (engines, propellers, and components), and all helicopters. A separate section for International SDRs for aircraft weighing 12,500 lbs. and under has also been included. Under a data exchange agreement, International SDRs are submitted to the FAA by the Civil Aviation Authority of other countries (currently, Canada - CAN, and Australia - AUS). All reports are sorted by aircraft make, model group (basic model), and Joint Aircraft System/Component (JASC) code. Within each aircraft model group, the specific model shown may vary, but similar types of reports will be grouped together and listed in ascending order by their JASC code. Each field contains all information submitted to the FAA. Some fields are not included in order to make the summary easier to read. Additional information may be obtained by referring to the "operator control number." Send your request to the Aviation Data Systems Branch, AFS-620 at the address or phone below.

The Regulatory Support Division (AFS-600) has established a "HomePage" on the Internet through which the same information is available. There is a large quantity of other information available through the AFS-600 HomePage such as the most current SDR system codes (i.e., Joint Aircraft System/Component Codes). The SDR Question and Answer Section of the Summary will also be transferred to the AFS-600 HomePage to simplify the process of preparing the SDR Summaries in the PDF format each week. There are "hot buttons" to take you to other locations and sites where FAA Flight Standards Service Information is available. The AFS-600 "HomePage" address is:

<http://www.mmac.jccbi.gov/afs/afs600>

"The Service Difficulty Reports in this publication are derived from unverified information submitted by the aviation community without FAA verification for accuracy. The number of SDRs submitted is not an indication of the mechanical reliability or fitness of an airline or individual operator, and the information should not be used as such."

Comments are welcomed and may be directed to:

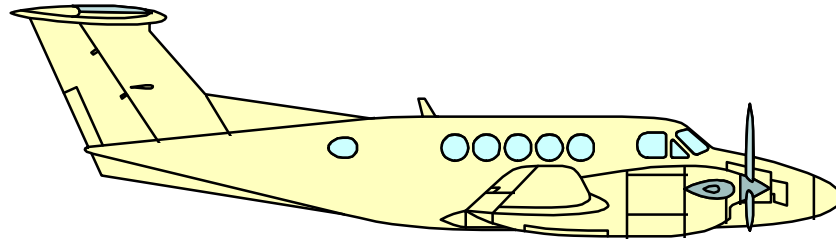
*Federal Aviation Administration
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125-5029
Phone: (405) 954-4171, Fax: (405) 954-4748*

Your continued participation is essential and is an integral part of ensuring aviation safety. Thank you for supporting the Service Difficulty Program! If you have any questions regarding this special notice you can contact John Jackson at (405) 954-6486, or Jim Gillespie at (405) 954-1141, or Blake McDonald at (405) 954-0307 in the Aviation Systems Branch (AFS-620). Their E-mail addresses are:

john_e_jackson@mmacmail.jccbi.gov

james_gillespie@mmacmail.jccbi.gov

blake_mcdonald@mmacmail.jccbi.gov



SIGNIFICANT OCCURRENCE REPORT





U.S. Department
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**Federal Aviation
Administration**

THE SIGNIFICANT OCCURRENCE REPORT



The Significant Occurrence Report is a compilation all of the star bordered reports that appear in the General Aviation Service Difficulty Report (SDR) Summary, ZAC-327. The Significant Occurrence Report is used to highlight industry problem areas to field inspectors and the aviation public.

Limited analysis is performed by the Aviation Data Systems Branch, AFS-620 during the preparation of the "Significant Occurrence Report", which is generated each week and is included in the front of the Air Carrier SDR Summary. Significant Reports are hand selected by AFS-620's inspectors based on the individual merit of each report. The criteria for selection includes, but is not limited to, items that indicate high failure rates; items related to accidents or incidents; or design or maintenance failures which may affect the safe operation of the aircraft.

In some cases, this limited analysis of SDR data leads to the preparation of information bulletins which are routed to the appropriate product certification office for further investigation of the problem. The end result may be the issuance of an airworthiness directive (AD) by the Aircraft Certification Service (AIR) if warranted.

The Significant Occurrence Report (section I) of the weekly SDR Summary is not intended to be a summary of all significant events and should not be used as such. We recommend that you review further the applicable sections of the SDR summary that may be of interest.

GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT

3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5520 OACR	58VB TJ260	BEECH 58P				BRACKET 9561001215	CRACKED ELEV HINGE	2086	1/5/98 98ZZZX1025
*****	DURING REPLACEMENT OF ELEVATOR INBOARD BEARINGS (WHICH WERE BOTH UNSERVICEABLE), THE UPPER RT CORNER OF BRACKET WAS FOUND CRACKED. A DYE-PENN INSP WAS PERFORMED AND TWO OTHER CRACKS WERE NOTED. WHEN BRACKET/HINGE WAS REMOVED AND CLEANED, THE BACK SIDE SHOWED MINOR TO MODERATE CORROSION AND CRACKS EXTENDING FROM TOP RIGHT BOLT HOLE UP AND AROUND EDGE, ALSO, ON LOWER RT FROM BOLT HOLE AND DOWN AND AROUND. REASON FOR OCCURRENCE, POSSIBLE METAL FATIGUE/OVERTORQUING OF BOLTS (IF PART WAS REPLACED, ALSO, TO MAKE SURE BEVELED WASHER UNDER BOLT HEAD (IS INSTALLED PROPERLY). CAREFULLY INSPECT ANNUALLY, REMOVE PAINT IF IN DOUBT OF CRACK OR NOT.								
5511	76512 10944	CESSNA 140			0432000	SPAR 0432160	MISSING HORIZONTAL STAB	2526	10/16/97 98ZZZX1002
*****	REINFORCEMENT CHANNEL/SPAR WAS MISSING/NOT INSTALLED. IT APPEARED THE SPAR HAD NEVER BEEN INSTALLED FROM THE FACTORY. SUBMITTER STATED THIS WAS A VERY DANGEROUS SITUATION. IT IS AMAZING THAT IT NEVER FAILED.								
5330	367BT 18267390	CESSNA 182Q				SKIN	CORRODED BELLY	2045	2/24/98 98ZZZX1019
*****	FOUND CORROSION UNDER FACTORY INSTALLED BLACK INSULATION PADS BONDED TO FUSELAGE BELLY SKINS UNDER CABIN FLOOR AND FUSELAGE SIDE SKINS. RECOMMEND REMOVAL OF ALL PADS AND TREAT CORROSION IAW SM AND AC 43-13-1A.								
3230 WTXR	3929Y 21058429	CESSNA 210D				ROLL PIN NAS561F412	FAILED GEAR CONT		1/26/98 98ZZZX1023
*****	ROLL PIN BACKED OUT OF GEAR CONTROL VALVE AT GEAR UP SELECTION, NO FURTHER GEAR SELECTION WAS POSSIBLE AT THIS TIME. CESSNA PARTS SHEET SHOWS AFFECTED PIN (ITEM NR 27). SUBMITTER RECOMMENDS GEAR POWER PACK SELECTOR ROLL PINS BE SAFETIED AND CHECKED EACH ANNUAL/100-HOUR INSPECTION.								
3246	108H 732	DHAV DHC2*				FITTING 55584	CRACKED FLOAT STRUT		3/2/98 98ZZZX1034
*****	ONLY WHEN SPREADER BAR IS REMOVED CAN THE FLOAT ATTACH FITTINGS BE VIEWED. BOTH FRONT FITTINGS WERE CRACKED THROUGH THE TAPER PIN HOLE. SUBMITTER BELIEVES THE PLATE IN THE SPREADER BAR HAD SOME PLAY AND SOMEONE PUT EXTRA WASHERS AT THE BOTTOM OF THE TAPER PIN PULLING IT TOO FAR DOWN INTO THESE CASTINGS.								
2810	61415 0018	HUGHES 269C				STRAP 269A832919	BROKEN INBD FUEL TANK	1143	2/27/98 98ZZZX1027
*****	DURING A ROUTINE PRE-FLIGHT INSPECTION, THE PILOT DISCOVERED THE INBOARD FUEL TANK STRAP WAS LOOSE. CLOSER INSPECTION REVEALED THE STRAP WAS BROKEN. THE BREAK WAS ACROSS TWO SPOT WELDS MADE DURING MANUFACTURE. SUBMITTER SUGGESTED THE STRAP MAY HAVE BEEN OVERTIGHTENED CAUSING IT TO BREAK.								
7322 OFIR	4561H 240767	MOONEY M20J	LYC IO360A3B6		BENDIX	SERVO RSA5AD1	CORRODED FUEL INJECTOR	1196	12/20/97 98ZZZX1001
*****	CORROSION FOUND INSIDE FUEL INJECTOR SERVO DIAPHRAGM SECTION WAS IMPEDING MOVEMENT OF DIAPHRAGM RESTRICTING FUEL FLOW. SUBMITTER SUSPECTED WATER LAYING IN THIS AREA CORRODING SMALL SECTION OF INJECTOR HOUSING CAUSED GROWTH OF CORROSION DEPOSIT. LAB REPORT ON CORROSION SENT TO PHILA FSDO.								
2913	6918 232038	PIPER PA23160				POWER PAK 31800002	RUPTURED HYDRAULIC SYSTEM		8/11/97 98ZZZX1021
*****	UPON LANDING ROLL-OUT, RT MAIN AND NOSE GEAR COLLAPSED. DROP CHECK IN HANGAR WITH HAND PUMP SHOWED NO ABNORMALITIES DURING OPERATION. POWER PAK REMOVED AND SENT FOR TEAR DOWN INSPECTION. THEY FOUND BLOW HOLE IN MAIN HOUSING CASTING AT POPPET HOLE. EITHER FATIGUED OR A THIN WALL DEFECT EXISTED TO CAUSE BLOW-OUT RESULTING IN SYSTEM PRESSURE GOING BACK TO RESERVOIR OF POWER PAK.								

(End of GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT)

Run Date: 19-Mar-98

FEDERAL AVIATION ADMINISTRATION
SIGNIFICANT OCCURRENCE REPORT INDEX

Showing Specific Part Numbers and Aircraft Model by Year

FOR THE PERIOD OF: 3/8/98 To 3/14/98

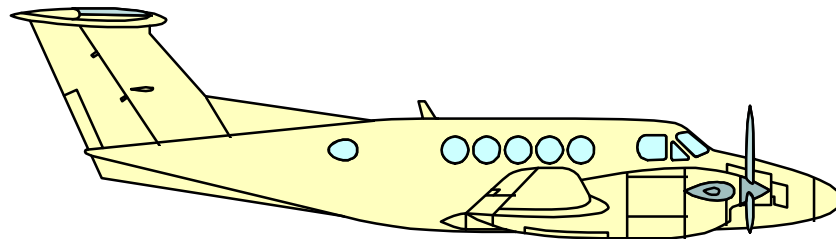
<u>PART NUMBER</u>			<u>YEAR</u>											
<u>PART NAME</u>	<u>ACFT MODEL</u>	<u>TOTAL</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
0432160														
SPAR	140	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 0432160 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
269A832919														
STRAP	269C	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 269A832919 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
31800002														
POWER PACK	PA23250	1	-	-	-	-	-	-	-	-	-	-	1	-
POWER PAK	PA23160	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 31800002 - - - - -		2	-	-	-	-	-	-	-	-	-	-	1	1
4002T96P02														
TURBINE	S61N	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 4002T96P02 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
4034260														
FUEL VALVE	757*	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 4034260 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
55584														
FITTING	DHC2*	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # 55584 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
9561001215														
BRACKET	58P	2	-	-	-	-	-	-	-	1	-	-	-	1
TOTAL of # 9561001215 - - - - -		2	-	-	-	-	-	-	-	1	-	-	-	1
NAS561F412														
ROLL PIN	210D	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL of # NAS561F412 - - - - -		1	-	-	-	-	-	-	-	-	-	-	-	1
RSA5AD1														
FCU	unknown	1	-	-	-	-	-	-	-	-	-	-	1	-

FAA SIGNIFICANT OCCURRENCE REPORT INDEX 3/8/98 To 3/14/98 (cont'd)

<u>PART NUMBER</u>		<u>YEAR</u>													
<u>PART NAME</u>	<u>ACFT MODEL</u>	<u>TOTAL</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	
RSA5AD1															
FUEL SERVO	PA23250	1	-	-	-	-	1	-	-	-	-	-	-	-	
INJECTOR SYSTEM	S1SPITTS	1	-	-	-	-	-	-	1	-	-	-	-	-	
INJECTOR UNIT	M20E	1	-	-	-	-	-	1	-	-	-	-	-	-	
SERVO	M20J	1	-	-	-	-	-	-	-	-	-	-	-	1	
	PA24260	1	-	-	-	-	-	-	-	-	-	-	1	-	
TOTAL of # RSA5AD1 -----		6	-	-	-	-	1	1	1	-	-	-	2	1	
TOTAL for ALL (15) PART NUMBERS: ----		16	-	-	-	-	1	1	1	1	-	-	3	9	
END OF SIGNIFICANT OCCURRENCE REPORT INDEX															



DOMESTIC SERVICE DIFFICULTY REPORT



DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5520 OACR	58VB TJ260	BEECH 58P				BRACKET 9561001215	CRACKED ELEV HINGE	2086	1/5/98 98ZZZX1025
*****	DURING REPLACEMENT OF ELEVATOR INBOARD BEARINGS (WHICH WERE BOTH UNSERVICEABLE), THE UPPER RT CORNER OF BRACKET WAS FOUND CRACKED. A DYE-PENN INSP WAS PERFORMED AND TWO OTHER CRACKS WERE NOTED. WHEN BRACKET/HINGE WAS REMOVED AND CLEANED, THE BACK SIDE SHOWED MINOR TO MODERATE CORROSION AND CRACKS EXTENDING FROM TOP RIGHT BOLT HOLE UP AND AROUND EDGE, ALSO, ON LOWER RT FROM BOLT HOLE AND DOWN AND AROUND. REASON FOR OCCURRENCE, POSSIBLE METAL FATIGUE/OVERTORQUING OF BOLTS (IF PART WAS REPLACED, ALSO, TO MAKE SURE BEVELED WASHER UNDER BOLT HEAD (IS INSTALLED PROPERLY). CAREFULLY INSPECT ANNUALLY, REMOVE PAINT IF IN DOUBT OF CRACK OR NOT.								
5511	76512 10944	CESSNA 140			0432000	SPAR 0432160	MISSING HORIZONTAL STAB	2526	10/16/97 98ZZZX1002
*****	REINFORCEMENT CHANNEL/SPAR WAS MISSING/NOT INSTALLED. IT APPEARED THE SPAR HAD NEVER BEEN INSTALLED FROM THE FACTORY. SUBMITTER STATED THIS WAS A VERY DANGEROUS SITUATION. IT IS AMAZING THAT IT NEVER FAILED.								
2820 G2AR	406ES 17280213	CESSNA 172R				HOSE	MISINSTALLED LT WING TANK	26	2/1/98 98ZZZX1022
	A FUEL HOSE WHICH CONNECTS THE LEFT WING TANK TO THE LEFT FUEL SUPPLY LINE AT THE WING ROOT WAS FOUND IMPROPERLY INSTALLED AND LEAKING. THIS WAS DISCOVERED DURING A REGULAR OIL CHANGE WHEN A FUEL STAIN WAS NOTICED ON THE WING ROOT AND FUSELAGE. FURTHER INVESTIGATION UNCOVERED THE SOURCE OF THE LEAK AS THE FUEL SUPPLY HOSE WHICH WAS INSTALLED WITH THE CLAMP AND HOSE END OUTBOARD OF THE BEAD OF THE TUBE.								
3246 BXSX	6814H 17265594	CESSNA 172M				WHEEL D30260	CRACKED MLG	3114	2/13/98 98ZZZX1013
	INSPECTION FOUND WHEEL CRACKED IN THE TYPICAL LOCATION. CRACKS EMANATING FROM EDGE OF FLANGE HOLES.								
3240	2939E 18268222	CESSNA 182R	CONT O470U			LINE 070009993	FAILED LT BRAKE	4082	2/3/98 98ZZZX999
	LEFT BRAKE FAILED ON TAKEOFF ROLL AND TAKEOFF ABORTED. FOUND SMALL HOLE WORN THROUGH ALUMINUM BRAKE LINE WHERE LINE CHAFED ON AFT SIDE OF ENTRY STEP CASTING. INSTALLED NEW 0700099-93 BRAKE LINE. SUGGEST REMOVING LANDING GEAR STRUT FAIRINGS FOR INSPECTION AT ANNUAL INSPECTION.								
5330	8480M 18264618	CESSNA 182P				SKIN	CORRODED BELLY	3985	2/12/98 98ZZZX1018
	FOUND CORROSION UNDER FACTORY INSTALLED BLACK INSULATION PADS BONDED TO FUSELAGE BELLY SKINS UNDER CABIN FLOORS. RECOMMEND REMOVAL OF INSULATION PADS AND TREAT CORROSION IAW SM AND AC 43-13-1A.								
5330	367BT 18267390	CESSNA 182Q				SKIN	CORRODED BELLY	2045	2/24/98 98ZZZX1019
*****	FOUND CORROSION UNDER FACTORY INSTALLED BLACK INSULATION PADS BONDED TO FUSELAGE BELLY SKINS UNDER CABIN FLOOR AND FUSELAGE SIDE SKINS. RECOMMEND REMOVAL OF ALL PADS AND TREAT CORROSION IAW SM AND AC 43-13-1A.								
7810 D99A	1293E 208B0537	CESSNA 208B				BRACKET 265401833	CRACKED EXHAUST	730	5/21/97 98ZZZX1024
	CENTER EXHAUST HANGER ON CESSNA 208B CARAVAN DEVELOPED CRACK .25 INCH LONG IN FORWARD, OUTBOARD BEND RADIUS DUE TO EXCESSIVE STRESS CAUSED BY IMPROPER SPACING (VIA WASHER SPACERS) BETWEEN LOWER ENGINE COWL AND BRACKET.								
3230 WTRX	3929Y 21058429	CESSNA 210D				ROLL PIN NAS561F412	FAILED GEAR CONT		1/26/98 98ZZZX1023
*****	ROLL PIN BACKED OUT OF GEAR CONTROL VALVE AT GEAR UP SELECTION, NO FURTHER GEAR SELECTION WAS POSSIBLE AT THIS TIME. CESSNA PARTS SHEET SHOWS AFFECTED PIN (ITEM NR 27). SUBMITTER RECOMMENDS GEAR POWER PACK SELECTOR ROLL PINS BE SAFETIED AND CHECKED EACH ANNUAL/100-HOUR INSPECTION.								

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3710	732DZ 21061446	CESSNA 210L				PUMP 212CW	FAILED VACUUM SYSTEM	1103	12/29/97 98ZZZX1014
VACUUM PUMP FAILED. SUBMITTER STATED ROUTINE WEAR CAUSED BY OPERATION HOURS.									
7931	2741R 340A0922	CESSNA 340A				LINE 530010816	CORRODED ENG OIL PRESSURE	4642	2/27/98 98ZZZX1033
PILOT EXPERIENCED LOSS OF OIL PRESSURE. UPON INVESTIGATION, FOUND RT ENGINE OIL PRESSURE LINE CORRODED THROUGH AT THE LOCATION UNDER THE FLOORBOARDS ON THE RIGHT SIDE OF AIRCRAFT WHERE LINE GOES OVER PRESSURIZATION DUCT. SUBMITTER FELT IT WAS DUE TO CONDENSATION AT THE POINT THE LINE AND DUCT INTERSECTED.									
3213 QTVR	7947Q 402B0397	CESSNA 402B				TRUNNION 5141001202	CRACKED RETRACT EAR	9346	1/19/98 98ZZZX1005
RETRACT ATTACH EAR CASTING BROKEN. SPACER P/N S133-4P32 AND BOLT P/N 464 P4-26 REPLACED WITH 1 'AN' 5 BOLT AND OVERTORQUED CAUSING UNDO STRESS TO CASTING.									
3230 PNSA	544AL 4410120	CESSNA 441				TURNBARREL	JAMMED LANDING GEAR		2/18/98 PNSA980203
GEAR WOULD NOT RETRACT FULLY. STEERING CABLE TURN BARREL BECAME JAMMED IN NOSE WELL. REPLACE TURNBARRLE, GEAR SWING CHECKED OK.									
3260 PNSA	441LL 441139	CESSNA 441				WIRE	LOOSE SQUAT SWITCH		2/10/98 PNSA980207
ENGINES WOULD NOT CRANK. SECURED WIRE AT SQUAT SWITCH, OPS CHECK OK.									
3246	108H 732	DHAV DHC2*				FITTING 55584	CRACKED FLOAT STRUT		3/2/98 98ZZZX1034
*****	ONLY WHEN SPREADER BAR IS REMOVED CAN THE FLOAT ATTACH FITTINGS BE VIEWED. BOTH FRONT FITTINGS WERE CRACKED THROUGH THE TAPER PIN HOLE. SUBMITTER BELIEVES THE PLATE IN THE SPREADER BAR HAD SOME PLAY AND SOMEONE PUT EXTRA WASHERS AT THE BOTTOM OF THE TAPER PIN PULLING IT TOO FAR DOWN INTO THESE CASTINGS.								
2913	6918 232038	PIPER PA23160				POWER PAK 31800002	RUPTURED HYDRAULIC SYSTEM	8/11/97 700	98ZZZX1021
*****	UPON LANDING ROLL-OUT, RT MAIN AND NOSE GEAR COLLAPSED. DROP CHECK IN HANGAR WITH HAND PUMP SHOWED NO ABNORMALITIES DURING OPERATION. POWER PAK REMOVED AND SENT FOR TEAR DOWN INSPECTION. THEY FOUND BLOW HOLE IN MAIN HOUSING CASTING AT POPPET HOLE. EITHER FATIGUED OR A THIN WALL DEFECT EXISTED TO CAUSE BLOW-OUT RESULTING IN SYSTEM PRESSURE GOING BACK TO RESERVOIR OF POWER PAK.								
2410 TRKR	2175K 28R7931028	PIPER PA28RT201T	CONT TSIO360FB			COUPLING 635796	FAILED ALTERNATOR DRIVE	1000	2/23/98 98ZZZX998
ALTERNATOR FAILED WHEN GEAR WAS RETRACTED. GEAR LOWERED AND RETURNED TO FIELD. PILOT REPORTED ALTERNATOR CHANGED ABOUT 10 HOURS AGO AND REGULATOR CHANGED ABOUT 20 HOURS AGO FOR SAME PROBLEM. FOUND ALTERATOR DRIVE SHEARED. REF: SPECIAL AIRWORTHINESS BULLETIN NR ANE 97-04 DATED JULY 24, 1997. INSTALLED NEW DRIVE, OPERATION CHECKS GOOD.									
3213	4842T 287225222	PIPER PA28140			62211	LINK ASSY 7803300	FAILED RT MLG		2/27/98 98ZZZX1017
STUDENT REPORT HARD LANDING. UPON INSPECTION, FOUND RT MLG TORQUE LINKS SEPARATED AND THE EARS WERE SHEARED FROM UPPER CYLINDER RT MAIN GEAR. SUSPECT STUDENT CAME IN HOT AND SIDEWAYS LANDING ON RT MAIN GEAR.									
5753 BX4R	7753W 281758	PIPER PA28180				RIB 6232801	CORRODED LT FLAP NOSE	3211	2/1/98 98ZZZX1004
FOUND MODERATE TO SEVERE CORROSION ON THE INTERIOR OF LEFT FLAP DURING RE-SKIN FOR HAIL DAMAGE. CORROSION WENT COMPLETELY THROUGH THE OUTBOARD RIB ON THE INBOARD HINGE BRACKET. THE ONLY WAY TO INSPECT THIS AREA IS BY REMOVING THE SKIN.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
5753 BX4R	7753W 281758	PIPER PA28180				HINGE BRACKET 6232400	CORRODED LT FLAP	3211	2/1/98 98ZZZX1003
FOUND MODERATE TO SEVERE CORROSION ON THE INTERIOR OF LEFT FLAP DURING RE-SKIN FOR HAIL DAMAGE. CORROSION WENT COMPLETELY THROUGH THE OUTBOARD RIB ON THE INBOARD HINGE BRACKET. THE ONLY WAY TO INSPECT THIS AREA IS BY REMOVING THE SKIN.									
3230 PNSA	15PR 318052011	PIPER PA31350				UPLOCK ROLLERS	LACK OF LUBE NLG		2/7/98 PNSA980210
NOSE GEAR WOULD NOT LOCK UP. CLEANED AND LUBED DIRTY NOSE GEAR UPLOCK ROLLER, OPS CHECK OK.									
3260 PNSA	3588Z 318052130	PIPER PA31350				DNLOCK SWITCH	LACK OF LUBE RT MLG		2/8/98 PNSA980205
RT MAIN WOULD NOT INDICATE DOWN AND LOCKED. UNEVENTFUL LANDING WAS MADE. CLEANED AND LUBED GEAR AND SWITCHES. NO FURTHER PROBLEMS NOTED.									
3222 PNSA	8004N 328206014	PIPER PA32301				STRUT	REQD SERVICE NLG		2/11/98 PNSA980208
NOSE GEAR SHIMMY WAS EXCESSIVE DURING TAKEOFF RUN. RETURNED TO HANGER SERVICED NOSE GEAR STRUT, OPS CHECK OK.									

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7200 HDNA	109MM 7279	AGUSTA A109A2	ALLSN 250C20			ENGINE	FLAMED OUT NR 1	2656	12/15/97 98ZZZX1028
SHORTLY AFTER TAKEOFF, THE NR 1 ENGINE 'FLAMED OUT'. THE AIRCRAFT WAS FLOWN ON TO AIRPORT AND LANDED ON ONE ENGINE WITHOUT INCIDENT. UPON INVESTIGATION, THE FRONT SUPPORT OF NR 1 ENGINE WAS FOUND WET. THIS INDICATES WATER OR ICE WAS PRESENT IN INTAKE. AIRCRAFT WAS INSPECTED AND RETURNED TO SERVICE.									
7313		AGUSTA A109A	ALLSN 250C20B		6890917	FILTER 47086	COLLAPSED FUEL NOZZLE	1284	2/24/98 98ZZZX1030
FUEL NOZZLE FILTER IS PARTIALLY COLLAPSED DUE TO FOREIGN OBJECT INSERTED INTO INLET.									
2330 HEEA	1072T 45385	BELL 206L1				PA AMPLIFIER AA20030	DEFECTIVE CABIN		3/3/98 HEEA0013132
PA AMPLIFIER LOW VOLUME.									
2840 HEEA	39122 3312	BELL 206B3				DUAL INDICATOR 206075186003	FAILED COCKPIT		3/4/98 HEEA0013237
DUAL INDICATOR LOADMETER IS INOPERATIVE.									
3020 HEEA	3181J 3771	BELL 206B3				ACTUATOR 206062625003	FAILED ENG ANTI ICE		3/4/98 HEEA0013212
ACTUATOR INOPERATIVE.									
3340 HEEA	1073W 45386	BELL 206L1				POWER SUPPLY A490A	FAILED STROBE		3/4/98 HEEA0013254
STROBE POWER SUPPLY PRODUCES WEAK FLASH.									
3416 HEEA	5742N 45477	BELL 206L1				ALTIMETER 59341	STUCK COCKPIT		3/4/98 HEEA0013229
ALTIMETER NEEDLE STUCK AT 54,000 FEET.									
3421 HEEA	5014V 45217	BELL 206L1				HORIZON GYRO 500DCF288	FAILED COCKPIT		3/4/98 HEEA0013196
HORIZ GYRO PRECESSES.									
3422 HEEA	1073W 45386	BELL 206L1				DIRECTION GYRO 2891ESR	FAILED COCKPIT		3/4/98 HEEA0013259
DG LOCKS UP; DOES NOT MOVE.									
3422 HEEA	1078C 45392	BELL 206L1				DIRECTION GYRO 2891ESR	DEFECTIVE COCKPIT		3/4/98 HEEA0013257
DIR GYRO LIGHTING IS OUT.									
3422 HEEA	5745N 45489	BELL 206L1				DIRECTION GYRO 2891ESR	MALFUNCTION COCKPIT		3/4/98 HEEA0013258
DIR GYRO INTERMITTENTLY GETS FLAG INDICATOR.									
3424 HEEA	6251Y 51556	BELL 206L3				INDICATOR A593002	FAILED COCKPIT		3/4/98 HEEA0013235
TURN & BANK INDICATOR NEEDLE DOES NOT DEFLECT IN EITHER DIRECTION.									

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3425 HEEA	2756P 2655	BELL 206B3			KI525A	INDICATOR 066304601	FAILED COCKPIT		3/4/98 HEEA0013206
	DEVIATION NEEDLE STICKS.								
3452 HEEA	2275Y 3626	BELL 206B3			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013135
	TRANSPONDER ON/OFF SWITCH LOOSE. PERFORMED PRELIMINARY INSPECTION. FOUND ON/OFF SWITCH BROKEN. REPLACED FACEPLATE ASSY, REPAIRED. ADJUSTED TO SPECS. BENCH CHECK GOOD.								
3452 HEEA	406EH 45183	BELL 206L1			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013125
	TRANSPONDER REPORTED INOPERATIVE. NO CODE OR ALTIMETER READOUT.								
3452 HEEA	3108E 51498	BELL 206L3			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013116
	ATC REPORTED TRANSPONDER AS INOPERATIVE. FOUND WEAK POWER OUT. REPLACED CAVITY OSCILLATOR V101. REPAIRED. REPLACED DETERIORATED RESISTOR R477 AND PHOTOCCELL V301 DUE TO WEAK REPLY LIGHT. REPAIRED. ADJUSTED FREQUENCY. BENCH CHECK GOOD.								
3453 HEEA	5017G 45228	BELL 206L1			KLN88	LORAN 066402600	FAILED COCKPIT		3/3/98 HEEA0013130
	KLN88 NO DISPLAY.								
3457 HEEA	22425 45743	BELL 206L1			GPS 150	GPS 0110005400	FAILED COCKPIT		3/3/98 HEEA0013124
	COCKPIT GPS HAS NO DISPLAY.								
3457 HEEA	4180F 51469	BELL 206L3				RECEIVER 13824120234	FAILED COCKPIT GPS		3/3/98 HEEA0013123
	GPS RECEIVER LOST ALL STATIONS. "WPT" BUTTON BACKLIGHTING INTERMITTENTLY.								
5510 HEEA	3892R 45594	BELL 206L1				STABILIZER ASSY 206023119151	SEPARATED HORIZ STAB		3/4/98 HEEA0013256
	STAB ASSY DOUBLER IS SEPARATED NEAR LEADING EDGE.								
6310 HEEA	7077B 52037	BELL 206L4			406040500113	BEARING 406040530101	FAILED COUPLING	5955	3/3/98 HEEA0013114
	BEARING BREAKING DOWN ON ROLLER. REPLACED WITH SERVICEABLE PART.								
6310 HEEA	7077B 52037	BELL 206L4			406040500113	INPUT SHAFT 406040516101	WORN XMSN	5955	3/3/98 HEEA0013115
	INPUT SHAFT SPLINES WORN BEYOND LIMITS. REPLACED WITH SERVICEABLE PART.								
6310 HEEA	7077B 52037	BELL 206L4			406040500113	BEARING 406040532101	GROOVED COUPLING	5955	3/3/98 HEEA0013113
	BEARING HAS GROOVES ON ROLLERS. REPLACED WITH SERVICEABLE PART.								
6510 HEEA	1078D 45397	BELL 206L1				DISC SET 327211	CORRODED T/R DRIVE		3/3/98 HEEA0013112
	DISC CORRODED AROUND BOLT HOLES. SCRAPPED DISC ASSY AND REPLACED WITH SERVICEABLE PART.								

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6710 HEEA	1078D 45397	BELL 206L1				SUPPORT ASSY 206001330001	CORRODED CYCLIC		3/3/98 HEEA0013110
CYCLIC SUPPORT ASSY CORROSION BEYOND LIMITS AROUND BASE AREA. SCRAPPED PART AND REPLACED WITH SERVICEABLE PART.									
6710 HEEA	513EH 45421	BELL 206L1				ACTUATOR 206062721109	FAILED DROOP COMP		3/4/98 HEEA0013215
ACTUATOR INOPERATIVE AND WILL NOT MOTOR.									
6710 HEEA	6160Y 51609	BELL 206L3				ACTUATOR 206062721109	FAILED DROOP COMP		3/4/98 HEEA0013214
ACTUATOR INOPERATIVE AND WILL NOT MOTOR.									
6730 HEEA	2756P 2655	BELL 206B3				SERVO 206076031017	LEAKING M/R	4533	3/4/98 HEEA0013204
SERVO LEAKING. SERIAL NUMBERS REMOVED ARE RH1375, RH1779, AND RH1777. SENT TO HELICOPTER ACCESSORY SERVICE FOR OVERHAUL.									
7310 HEEA	1078D 45397	BELL 206L1				FITTING 206063637001	CORRODED FUEL MANIFOLD		3/3/98 HEEA0013111
FUEL MANIFOLD FITTING ASSY. HAS EXCESSIVE CORROSION ON EARS OF MANIFOLD AROUND BOLT HOLES. REPLACED WITH SERVICEABLE PART.									
7314 HEEA	31077 51520	BELL 206L3				FUEL PUMP 3881005	WORN ENG FUEL	6031	3/4/98 HEEA0013187
FUEL PUMP DRIVE SHAFT, SHOW SIGNS OF STEP WEAR ON SPLINES.									
7722 HEEA	21240 45647	BELL 206L1				INDICATOR 206375006101	INTERMITTENT COCKPIT		3/4/98 HEEA0013238
EXH TEMP INTERMITTENTLY READS UP TO 200 DEGREES LOW.									
8010 HEEA	31801 51074	BELL 206L3				RELAY SM20ACD200A21	BURNT STARTER		3/2/98 HEEA0013107
STARTER STAYS ENGAGED. INSPECTED BY ACCESSORY OVERHAUL SHOP AND FOUND CONTACTS WERE BURNT.									
2310 HEEA	5736D 31135	BELL 212			KCU951	CONTROL 064101600	DEFECTIVE COCKPIT HF		3/4/98 HEEA0013175
DISPLAY HARD TO READ AND CHANNELS INTERMITTENTLY.									
2822 HEEA	3208H 31304	BELL 212				PUMP 205060606003	FAILED FUEL BOOST		3/4/98 HEEA0013250
BOOST PUMP POPPING CIRCUIT BREAKER.									
6210 HEEA	5736D 31135	BELL 212				GRIP 204011121009	WORN M/R	11359	3/4/98 HEEA0013208
DRAG BRACE BUSHINGS AND PITCH HORN BORES WORN BEYOND LIMITS.									
6320	5017H 30930	BELL 212				GEARBOX 212040001141FM	BINDING M/R	5715 2844	2/25/98 98ZZZX1009
GEARBOX BINDING AND MAKING NOISE WHEN TURNED BY HAND. NON-METALIC CONTAMINATION FOUND ON OIL PUMP INLET SCREEN AND IN SUMP AND INTERNAL FILTER.									

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2430 HEEA	8045T 28101	BELL 214ST				RELAY 214175132103	FAILED DC SYS		3/4/98 HEEA0013210
BATTERY VOLTAGE DROPS DURING START.									
2430 HEEA	8045T 28101	BELL 214ST				RELAY 214175171103	FAILED BATTERY SYS		3/4/98 HEEA0013211
CAUSING VOLTAGE TO DROP DURING ENGINE START.									
2432 HEEA	8045T 28101	BELL 214ST				BATTERY CHARGER 214175379103	MALFUNCTION DC SYS		3/4/98 HEEA0013209
BATTERY SWITCH LIGHT REMAINS ON.									
2432 HEEA	6957Y 28139	BELL 214ST				BATTERY CHARGER 214175379103	MALFUNCTION DC SYS		3/4/98 HEEA0013243
BATTERY CHARGER VOLT SPIKES.									
2436 HEEA	59806 28140	BELL 214ST				REGULATOR 214175153105	FAILED DC SYS		3/4/98 HEEA0013246
VOLTAGE REGULATOR UNABLE TO ADJUST VOLTAGE.									
2611 HEEA	6957Y 28139	BELL 214ST				SMOKE DETECTOR 3023131	FAILED DET SYS		3/4/98 HEEA0013207
SMOKE DETECTOR WILL NOT TEST.									
2841 HEEA	6957Y 28139	BELL 214ST				INDICATOR 214175257103	FAILED FUEL QTY		3/4/98 HEEA0013236
ADC DOES NOT COUNT DOWN AS FUEL IS BURNT.									
3340 HEEA	8045T 28101	BELL 214ST				POWER SUPPLY 214175127103	FAILED LIGHTS		3/4/98 HEEA0013200
POWER SUPPLY UPPER AND LOWER LIGHT WILL NOT ILLUMINATE.									
3414 HEEA	59806 28140	BELL 214ST				TRANSDUCER 214074152101	FAILED AIRSPEED		3/4/98 HEEA0013247
AIRSPEED TRANSDUCER INOPERATIVE.									
3421 HEEA	59806 28140	BELL 214ST				INDICATOR 222375033103	PRECESSES COCKPIT		3/4/98 HEEA0013218
ATTITUDE INDICATOR PRECESSES DURING FLIGHT.									
3454 HEEA	8045T 28101	BELL 214ST				CONTROL 071121627	FAILED NAV UNIT		3/3/98 HEEA0013118
DISPLAY IS NOT CHANNELING CORRECTLY. PERFORMED PRELIMINARY INSPECTION. FOUND PHOTOCELL LENS MISSING. INSTALLED PHOTOCELL LENS P/N 088-0548-00. REPAIRED. BENCH CHECK GOOD.									
6210 HEEA	6957Y 28139	BELL 214ST				BLADE 214015300107	TORN M/R	1952	3/4/98 HEEA0013193
UPPER EROSION SHIELD TORN AND SEPARATED AT THE OUTBOARD END.									

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3452 HEEA	CGOFL 53130	BELL 407			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/4/98 HEEA0013194
KT76 TRANSCEIVER DRAWS EXCESSIVE CURRENT.									
3452 HEEA	406PH 53198	BELL 407			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013109
TRANSPONDER WILL NOT IDENT AND WILL NOT TEST. PERFORMED PRELIMINARY INSPECTION AND FOUND SWITCH BOARD INTERMITTENT. REPLACED SWITCH BOARD. ALSO FOUND PHOTOCELL NOT DIMMING PROPERLY. REPLACED PHOTOCELL. UNIT BENCH CHECK GOOD.									
3452 HEEA	406PH 53198	BELL 407			KT76	TRANSPONDER 066106200	DEFECTIVE COCKPIT		3/3/98 HEEA0013119
BENCH CHECK NEEDED. REPLACED WEAK V301 PHOTODETECTOR, DETERIORATED R477 RESISTOR, INSTALLED MISSING IDENT PUSH BUTTON AND INSTALLED HEAT SINK FOR Q415. ADJUSTED AS NEEDED AND BENCH CHECK GOOD.									
2160 HEEA	3893P 33012	BELL 412				MOTOR 212073927001	FAILED TEMP CONTROL		3/4/98 HEEA0013213
TEMP CONTROL MOTOR INOPERATIVE.									
2312 HEEA	7128R 36007	BELL 412			KFS598	CONTROL 071121524	FAILED COCKPIT		3/3/98 HEEA0013117
DISPLAY STAYS BRIGHT. PERFORMED PRELIMINARY INSPECTION. REPLACED V301 PHOTOCELL. REPAIRED. ALSO INSTALLED P201 HEADER, AND APPLIED HUMISEAL. CHECKED 5V LIGHTING. BENCH CHECK GOOD.									
2435 HEEA	1202T 33112	BELL 412				STATOR 23046313	FAILED START/GEN		3/4/98 HEEA0013178
CAUSING STARTER GENERATOR NOT TO COME ON LINE, CAUSES GENERATOR VOLTMETER TO PEG BACKWARDS AND FLASHING FIELD DID NOT HELP.									
2435 HEEA	107X 33113	BELL 412				STARTER GEN 200SG119Q	FAILED ENGINE	142	3/4/98 HEEA0013188
STARTER GENERATOR INOPERATIVE. INSPECTED BY ACCESSORY OVERHAUL SHOP AND FOUND UPPER BEARING FAILED DAMAGING FAN AND POSSIBLY ARMATURE AND STATOR.									
2611 HEEA	3893L 33006	BELL 412				SMOKE DETECTOR 302319	FAILED CABIN		3/4/98 HEEA0013248
SMOKE DET CAUTION LIGHT DOES NOT ILLUMINATE.									
2823 HEEA	22347 36005	BELL 412				VALVE L88010501	MALFUNCTION FUEL SYS		3/4/98 HEEA0013253
FUEL VALVE HAS LOUD SQUEALING NOISE.									
2930 HEEA	3911L 33023	BELL 412				INDICATOR 124043	FAILED HYD PRESS/TEMP		3/4/98 HEEA0013233
HYD PRESSURE/ TEMP LIGHT IN INOPERATIVE.									
3421 HEEA	107X 33113	BELL 412				INDICATOR 222375033103	PRECESSES COCKPIT		3/4/98 HEEA0013219
ATTITUDE INDICATOR EXCESSIVE PRECESSING IN PITCH AND ROLL.									
3425 HEEA	3893S 33022	BELL 412				ATT INDICATOR 5040017901	FAILED COCKPIT		3/3/98 HEEA0013136
POWER FLAG WON'T PULL - DOESN'T APPEAR TO COME ON. REPLACED WITH SERVICEABLE PART.									

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3425 HEEA	2148K 36001	BELL 412				INDICATOR 1113025	FAILED COCKPIT		3/4/98 HEEA0013222
HSI INDICATOR COURSE SET INOPERATIVE.									
3425 HEEA	6559Z 36019	BELL 412				HSI 1258103	FAILED COCKPIT		3/4/98 HEEA0013221
HSI HEADING SET INOPERATIVE.									
5520 HEEA	2298Z 33077	BELL 412				ELEVATOR 206030856111	MIS MFG MOUNT HOLE		3/3/98 HEEA0013137
UNABLE TO INSTALL ELEVATOR DUE TO MOUNTING BOLT HOLE MISALIGNED WITH HORN. INSTALLED SERVICEABLE ELEVATOR.									
6210 HEEA	3893N 33010	BELL 412				BLADE 412015300109	UNBONDED M/R	10727	3/3/98 HEEA0013131
M/R BLADE HAS FRETTING PAD UNBONDED ON LOWER LEADING EDGE SURFACE.									
6210 HEEA	2148K 36001	BELL 412				BLADE 412015300109	CRACKED M/R	7470	3/3/98 HEEA0013122
BLADE HAS BEEN REPAIRED PREVIOUSLY ON UPPER SURFACE AT STATION 121.25". THERE WAS EVIDENCE OF SKIN CRACK AT THE EDGE OF THE REPAIR.									
6240 HEEA	2261D 33076	BELL 412				INDICATOR 412075010109	FAILED TRIPLE TACH		3/4/98 HEEA0013177
TRIPLE TACH HAS MOISTURE IN GLASS. ALL NEEDLES HAVE STICKY OPERATION.									
6240 HEEA	1202T 33112	BELL 412				INDICATOR 412075010109	FAILED TRIPLE TACH		3/4/98 HEEA0013174
NR2 NEEDLE STICKS IN STARTUP. NEEDLES NR1 AND NR2 HAVE EXCESSIVE SPLIT. TIME SINCE REPAIR 34:25.									
6240 HEEA	33008 36004	BELL 412				INDICATOR 412075010111	FAILED TRIPLE TACH		3/4/98 HEEA0013176
TRIPLE TACH ALL NEEDLES READ APPROXIMATELY 3% HIGH, ALSO HAVE STICKY OPERATION BELOW 20%.									
6320 HEEA	108X 33115	BELL 412				RING GEAR 205040231009	CORRODED M/R GR BOX		3/4/98 HEEA0013197
WORN PILOT DIA'S AND CORROSION ON UPPER AND LOWER FLANGES.									
6320 HEEA	33008 36004	BELL 412			412040123101	SEAL 412040101101	LEAKING M/R GR BOX	365	3/3/98 HEEA0013138
SEAL LEAKING. REPLACED WITH SERVICEABLE SEAL.									
6710 HEEA	22347 36005	BELL 412				ACTUATOR ROTARY 214001347005	FAILED M/R		3/4/98 HEEA0013244
ROTARY ACTUATOR INOPERATIVE.									
7714 HEEA	3911L 33023	BELL 412				INDICATOR 212075037101	STICKS ENG N1		3/4/98 HEEA0013245
ENG N1 NEEDLE HAS STICKY OPERATION THROUGHOUT SCALE.									

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7714 HEEA	21498 36003	BELL 412				TACH GENERATOR 22A690	FAILED ENGINE		3/4/98 HEEA0013216
TACH GENERATOR INOPERATIVE.									
7714 HEEA	7128R 36007	BELL 412				GENERATOR GEU7A	MALFUNCTION ENG TACH		3/4/98 HEEA0013217
TACH GENERATOR INTERMITTENT LIGHT.									
2562 HEEA	54191 S804	BOLKMS BO105S			NARCO	ELT ELT910	DEFECTIVE COCKPIT		3/4/98 HEEA0013241
NARCO ELT TRANSMITS SIGNAL INADVERTANTLY.									
2612 HEEA	91070 S145	BOLKMS BO105S				FIRE CONT UNIT 10593951	MALFUNCTION LT ENG		3/4/98 HEEA0013252
L/H ENGINE FIRE LIGHT INTERMITTENTLY STICKS ON.									
2822 HEEA	911DD S830	BOLKMS BO105S			D107318D1	BEARING D10731818	SEIZED BOOST PUMP	490	3/3/98 HEEA0013128
PUMP INOPERATIVE. BEARINGS FROZE UP CAUSING PUMP TO FAIL.									
2822 HEEA	911DD S830	BOLKMS BO105S			D107318D1	BEARING D105300010	SEIZED BOOST PUMP	490	3/3/98 HEEA0013129
PUMP INOPERATIVE. BEARINGS FROZE UP CAUSING PUMP TO FAIL.									
3444 HEEA	137AE S851	BOLKMS BO105S				ANTENNA 071111400	DEFECTIVE RADAR ALT		3/4/98 HEEA0013205
ERRATIC ALTIMETER OPERATION.									
3453 HEEA	721MB S752	BOLKMS BO105S			ARNAV 21	LORAN 4530103	FAILED COCKPIT		3/4/98 HEEA0013180
WHEN SCROLLING IN AUX OR NAV MODE UNIT INTERMITTENTLY LOSES DISPLAY AND STARTS OVER. INTERMITTENT IN CDI MODE.									
3454 HEEA	205UC S668	BOLKMS BO105S			KING KI229	RMI 066303800	FAILED COCKPIT		3/3/98 HEEA0013133
WILL NOT SLAVE WITH HSI.									
3454 HEEA	818SH S753	BOLKMS BO105S			KING KI229	RMI 066303800	FAILED COCKPIT		3/4/98 HEEA0013255
RMI INOPERATIVE.									
3457 HEEA	624MB S751	BOLKMS BO105S			GPS 150	GPS 0110005400	FAILED COCKPIT		3/4/98 HEEA0013190
INNER KNOB ON GPS WILL NOT SELECT CORRECT CHOICE INTERMITTENTLY.									
3457 HEEA	624MB S751	BOLKMS BO105S			GPS 150	GPS 0110005400	FAILED COCKPIT		3/2/98 HEEA0013108
GPS DISPLAY FADES OUT AFTER 3 TO 4 MINUTES. NOTE: FADES MORE AT NIGHT. TIME SINCE REPAIR 0:00.									

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3457 HEEA	8199J S826	BOLKMS BO105S			SKYNAV 5000	GPS 0845000000	FAILED COCKPIT		3/4/98 HEEA0013182
	GPS INOPERATIVE.								
3457 HEEA	135AE S838	BOLKMS BO105S			GPS 150	GPS 0110005400	FAILED COCKPIT		3/4/98 HEEA0013189
	GPS INTERNAL BATTERY IS DEAD.								
5610 HEEA		BOLKMS BO105S				WINDOW 1054002	MIS MFG RT ROOF		3/4/98 HEEA0013199
	SKYLIGHT WAS MANUFACTURED 3/16" TOO SHORT IN WINDOW LENGTH AND WIDTH; THAN FACTORY WIDTH.								
6230 HEEA	967MB S737	BOLKMS BO105S			4638001004	BUSHING 4619205004	WORN M/R GR BOX		3/3/98 HEEA0013141
	3000 HOUR OVERHAUL DUE. BUSHING LOCK AREA WORN. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6230 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROTOR MAST 4638205005	CORRODED M/R GR BOX		3/3/98 HEEA0013139
	3000 HOUR OVERHAUL DUE. MAST HAD CORROSION IN BUSHING BORES BEYOND LIMITS. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6230 HEEA	967MB S737	BOLKMS BO105S			4638001004	SUPPORT TUBE 4638205009	WORN M/R GR BOX		3/3/98 HEEA0013140
	3000 HOUR OVERHAUL DUE. SUPPORT TUBE WORN ANODIZED SURFACE. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6240 HEEA	4573B S673	BOLKMS BO105S				TRANSMITTER 10594576	FAILED MAST MOMENT		3/4/98 HEEA0013239
	MAST MOMENT INDICATOR NO INDICATION IN FLIGHT.								
6240 HEEA	4573B S673	BOLKMS BO105S				INDICATOR 10594564	FAILED MAST MOMENT		3/4/98 HEEA0013240
	MAST MOMENT INDICATOR HAS NO INDICATION IN FLIGHT.								
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ELBOW 4619308044	CORRODED M/R GR BOX		3/3/98 HEEA0013153
	3000 HOUR OVERHAUL DUE. ELBOW HAS CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	GEAR 4638304002	SPALLED M/R GR BOX		3/3/98 HEEA0013146
	3000 HOUR OVERHAUL DUE. GEAR SPALLING. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	OUTER DEFLECTION 1054190206	CRACKED M/R GR BOX		3/3/98 HEEA0013142
	3000 HOUR OVERHAUL DUE. OUTER DEFLECTION CRACKED. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	WASHER 4619303053	WORN M/R GR BOX		3/3/98 HEEA0013143
	3000 HOUR OVERHAUL DUE. WASHER WORN. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.								

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	SHAFT 4638302013	WORN M/R GR BOX		3/3/98 HEEA0013145
3000 HOUR OVERHAUL DUE. WORN CLUTCH AREA. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	PLANETARY AXLE 4619204001	PITTING M/R GR BOX		3/3/98 HEEA0013147
3000 HOUR OVERHAUL DUE. PLANITARY AXLE PITTING. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	CONNECTING SHAFT 4619312040	WORN M/R GR BOX		3/3/98 HEEA0013148
3000 HOUR OVERHAUL DUE. CONNECTING SHAFT DRIVE SPLINES WORN. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	SUN GEAR 4619313006	CORRODED M/R GR BOX		3/3/98 HEEA0013149
3000 HOUR OVERHAUL DUE. SUN GEAR FRETTING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	SLIDING SLEEVE 10541961	CORRODED M/R GR BOX		3/3/98 HEEA0013150
3000 HOUR OVERHAUL DUE. SLIDING SLEEVE HAS CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ACCY HOUSING 4619312027	CORRODED M/R GR BOX		3/3/98 HEEA0013151
3000 HOUR OVERHAUL DUE. ACCY HOUSING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	PLANETARY GEAR 4619213010	CORRODED M/R GR BOX		3/3/98 HEEA0013152
3000 HOUR OVERHAUL DUE. PLANETARY GEAR HAS CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BALL BEARING 4619307024	CORRODED M/R GR BOX		3/3/98 HEEA0013168
3000 HOUR OVERHAUL DUE. BEARING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	SUN GEAR 4638304001	SPALLED M/R GR BOX		3/3/98 HEEA0013154
3000 HOUR OVERHAUL DUE. SUN GEAR SPALLING. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	CYLINDER ROLLER 4619303081	FAILED M/R GR BOX		3/3/98 HEEA0013171
3000 HOUR OVERHAUL DUE. ROLLER BEARING P/N 4638-302-025 RECOMMENDED. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BEARING 4638302024	FAILED M/R GR BOX		3/3/98 HEEA0013170
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619307025	CORRODED M/R GR BOX		3/3/98 HEEA0013169
3000 HOUR OVERHAUL DUE. BEARING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BALL BEARING 4619312050	CORRODED M/R GR BOX		3/3/98 HEEA0013167
3000 HOUR OVERHAUL DUE. BEARING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BALL BEARING 4619307023	CORRODED M/R GR BOX		3/3/98 HEEA0013166
3000 HOUR OVERHAUL DUE. BALL BEARING CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	CYLINDER ROLLER 4619312030	CORRODED M/R GR BOX		3/3/98 HEEA0013165
3000 HOUR OVERHAUL DUE. CORROSION ON ROLLERS. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619306020	FAILED M/R GR BOX		3/3/98 HEEA0013164
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619306019	FAILED M/R GR BOX		3/3/98 HEEA0013163
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619303084	FAILED M/R GR BOX		3/3/98 HEEA0013157
3000 HOUR OVERHAUL DUE. ROLLER BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	DRIVE SHAFT 4619303060	WORN M/R GR BOX		3/3/98 HEEA0013155
3000 HOUR OVERHAUL DUE. WORN GEAR SET. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619305042	FAILED M/R GR BOX		3/3/98 HEEA0013162
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER AND CORROSION. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BEVEL GEAR 4638303001	WORN M/R GR BOX		3/3/98 HEEA0013156
3000 HOUR OVERHAUL DUE. BEVEL GEAR WORN SEAT AREA. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BEARING 4619303083	FAILED M/R GR BOX		3/3/98 HEEA0013158
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4619303004	FAILED M/R GR BOX		3/3/98 HEEA0013159
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	ROLLER BEARING 4638305028	FAILED M/R GR BOX		3/3/98 HEEA0013160
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6320 HEEA	967MB S737	BOLKMS BO105S			4638001004	BALL BEARING 4638305001	FAILED M/R GR BOX		3/3/98 HEEA0013161
3000 HOUR OVERHAUL DUE. BEARING ROLLOVER. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6320 HEEA	81832 S828	BOLKMS BO105S				INDICATOR 4011001	FAILED XMSN OIL PRESS		3/4/98 HEEA0013179
TRIPLE OIL PRESSURE INDICATOR FAILED. TRANSMISSION PRESSURE DROPPING TO ZERO.									
6320 HEEA	3071K S859	BOLKMS BO105S			4638001001	UPPER HOUSING 4638201005	CRACKED M/R GR BOX		3/3/98 HEEA0013120
CRACK FOUND ON INBOARD RADIUS AND ACROSS RIB IN UPPER AREA OF HOUSING. REPLACED WITH SERVICEABLE PART.									
6321 HEEA	967MB S737	BOLKMS BO105S			4638001004	BRAKE DISC 133273	WARPED M/R GR BOX		3/3/98 HEEA0013144
3000 HOUR OVERHAUL DUE. BRAKE DISC WARPED. SCRAPPED PART. REPLACED WITH SERVICEABLE PART.									
6410 HEEA	91070 S145	BOLKMS BO105S				BLADE 10531980	ERRODED T/R	898	3/4/98 HEEA0013201
PAINT EROSION AT BLADE TIP ON S/N 646. PAINT EROSION AND RUBBER COATING PEELED OFF AT BLADE TIP ON S/N 655.									
6520 HEEA	5029H S670	BOLKMS BO105S				GEAR HOUSING 4619210901	DEFECTIVE T/R HEAD		3/4/98 HEEA0013202
VERIFICATION OF "B" DIM.									
7722 HEEA	4294R S860	BOLKMS BO105S				INDICATOR 50061036	DEFECTIVE EXH TEMP		3/4/98 HEEA0013234
EXH TEMP INDICATOR STATIC READING 50 DEGREES HIGH.									
7931 HEEA	911DD S830	BOLKMS BO105S				INDICATOR WARN 6607190A	FAILED OIL PRESS		3/4/98 HEEA0013251
OIL PRESS INDICATOR HAS NO "T" OIL LIGHT INDICATION.									
2312 HEEA	401PH 7050	BOLKMS BK117A3			RT138F	RECEIVER 40001452500	FAILED COCKPIT		3/4/98 HEEA0013183
DOES NOT TRANSMIT.									
6210 HEEA	911RZ 7092	BOLKMS BK117A4				BLADE 117150071	SEPARATED M/R	2772	3/3/98 HEEA0013173
ABRASION STRIP SEPARATED ON THE INBOARD END BOTH SURFACES BEYOND LIMITS.									
6210 HEEA	911RZ 7092	BOLKMS BK117A4				BLADE 117150071	SEPARATED M/R	2772	3/3/98 HEEA0013172
ABRASION STRIP SEPARATED ON THE INBOARD END LOWER SIDE BEYOND LIMITS.									
6710 R7MA	901CF 90000012	DOUG MD900				BEARING 900C3010042105	BINDING M/R SHAFT	821	1/29/98 98ZZZX1010
BALL SLIDER BEARING BINDING ON MAIN ROTOR SHAFT ASSY DURING COLLECTIVE MOVEMENT. REPLACED WITH NEW UNIT, CORRECTED PROBLEM.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
6710 R7MA	901CF 90000012	DOUG MD900				SERVO ACTUATOR 900C3820021105	BINDING M/R CONTROL	1904	1/26/98 98ZZZX1011
M/R CONTROL SERVO BINDING ON DOWN STROKE. REPLACED WITH NEW UNIT, CORRECTED PROBLEM.									
7160 R7MA	901CF 90000012	DOUG MD900				ACTUATOR 900CF330001101	FAILED INLET DOOR	26	1/26/98 98ZZZX1015
INLET DOOR LINEAR ACTUATOR FAILED IN OPEN POSITION. REPLACED WITH NEW UNIT, CORRECTED PROBLEM.									
2810	61415 0018	HUGHES 269C				STRAP 269A832919	BROKEN INBD FUEL TANK	1143	2/27/98 98ZZZX1027
*****	DURING A ROUTINE PRE-FLIGHT INSPECTION, THE PILOT DISCOVERED THE INBOARD FUEL TANK STRAP WAS LOOSE. CLOSER INSPECTION REVEALED THE STRAP WAS BROKEN. THE BREAK WAS ACROSS TWO SPOT WELDS MADE DURING MANUFACTURE. SUBMITTER SUGGESTED THE STRAP MAY HAVE BEEN OVERTIGHTENED CAUSING IT TO BREAK.								
6320 OWVL	134KA A940006	KAMAN K1200			K974002009	OIL PUMP K94120107	FAILED M/R GEARBOX		1/20/97 98ZZZX1016
HAD TO REMOVE TRANSMISSION FOR DAMAGED OIL PUMP DRIVE GEAR CAUSED FROM OIL PUMP SEIZURE (NO SHEAR SHAFT ON OIL PUMP). DATE OF INCIDENT 1-20-97.									
2210 HEEA	1546K 760082	SKRSKY S76A				VERTICAL GYRO 7660002113103	MALFUNCTIONED AFCS		3/4/98 HEEA0013230
VERT GURO CAUSES AFCS TO PORPOISE.									
2210 HEEA	3122H 760233	SKRSKY S76A			769000180210	POTENTIOMETER 7683431	FAILED AUTO PILOT	384	3/4/98 HEEA0013192
ACTUATOR DOES NOT MOVE. INSPECTED BY ACCESSORY OVERHAUL SHOP AND FOUND ONE EACH POTENTIOMETER CHECKED BAD, HAD NO READING ON TEST.									
2370 HEEA	706AE 760275	SKRSKY S76A				CVR 9806020023	FAILED COCKPIT	655	3/3/98 HEEA0013121
CVR WILL NOT TEST.									
2421 HEEA	1545X 760050	SKRSKY S76A				GENERATOR 7655009005105	FAILED AC SYS		3/3/98 HEEA0013126
AC GENERATOR INOPERATIVE. THIS IS THE THIRD TIME THIS GENERATOR WAS REMOVED FOR BEING INOPERATIVE SINCE WE RECEIVED IT OVERHAULED 2-28-97.									
3421 HEEA	5426U 760167	SKRSKY S76A				VERTICAL GYRO 7660002113102	FAILED COCKPIT		3/4/98 HEEA0013231
VERT GYRO MALFUNCTION. TAKES 5 TO 7 MINUTES TO PULL FLAG ON ADI.									
3421 HEEA	5426U 760167	SKRSKY S76A				VERTICAL GYRO 7660002113102	DEFECTIVE COCKPIT		3/4/98 HEEA0013232
ADI WILL FALL 90 DEGREES.									
3425 HEEA	4253S 760035	SKRSKY S76A				INDICATOR 1113025	DEFECTIVE COCKPIT		3/4/98 HEEA0013223
HSI INDICATOR COURSE WINDOW DOES NOT MATCH YELLOW NEEDLE.									
3452 HEEA	31219 760230	SKRSKY S76A				TRANSPONDER 066104100	FAILED COCKPIT		3/4/98 HEEA0013184
TRANSPONDER WILL NOT TRANSMIT.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
3453 HEEA	707AE 760276	SKRSKY S76A				LORAN 453105004	FAILED COCKPIT		3/3/98 HEEA0013127
LORAN WILL NOT SELF TEST OR ANY FUNCTION LIGHTS WHEN TURNED ON.									
3454 HEEA	22342 760096	SKRSKY S76A				CONTROL 071121627	FAILED COCKPIT NAV		3/4/98 HEEA0013186
NAV CONTROL WILL NOT TURN OFF WITH ON/OFF SWITCH.									
3454 HEEA	15460 760223	SKRSKY S76A				RECEIVER 066107800	INTERMITTENT VHF NAV		3/4/98 HEEA0013191
PANEL LIGHTS ILLUMINATE INTERMITTENTLY.									
3454 HEEA	31217 760229	SKRSKY S76A			KDA697	INDICATOR 071107600	FAILED COCKPIT		3/4/98 HEEA0013185
NO. 2 VOR - GREEN NEEDLE DOESN'T POINT TO STATION BOTH SIDES.									
6200 HEEA	5128 760181	SKRSKY S76A			761020800005	PITCH HORN 7610208011042	GROOVED M/R SYS	4298	3/3/98 HEEA0013134
DEEP GROOVE ON INBOARD LUG (WASHER AREA) APPROXIMATELY .025" IN DEPTH. SCRAPPED PART. REPLACED WITH SERVICEABLE PITCH HORN.									
6500 HEEA		SKRSKY S76A				BUSHING 7635805127101	OVERSIZE T/R		3/4/98 HEEA0013226
T/R DRIVE BUSHING OVERSIZED.									
6730 HEEA		SKRSKY S76A				GLAND 30006773	GOUGED M/R SERVO		3/4/98 HEEA0013198
GLAND FOUND TO BE GOUGED AT LOWER OUTER END.									
7600 HEEA	1546K 760082	SKRSKY S76A				AMPLIFIER 7690001880106	FAILED DROOP COMP		3/4/98 HEEA0013249
DROOP COMPENSATOR FAILED DCA TEST.									
2562 HEEA	350BZ 2653	SNIAS AS350B2			NARCO	ELT ELT910	FAILED COCKPIT		3/4/98 HEEA0013242
ELT FAILED "G" SWITCH TEST.									
6320 FF6R		SNIAS AS350B2				EPICYCLIC 350A32011000	SCORED M/R	3021	1/21/98 98ZZZX1008
EPICYCLIC SENT IN FOR MODERATE SCORING ON INNER RACE OF THREE GEARS AND SLIGHT PITTING ON ONE GEAR.									
6410	2FOR 2296	SNIAS AS350B1			355A1200408	SCREW 22208BC0500012L	FAILED T/R BLADE BAL		3/7/98 98ZZZX1029
DURING REMOVAL OF T/R BLADE TIP SCREW, THE SCREW BROKE. SCREW IS LOCATED AT THE TIP OF TAIL ROTOR BLADE TO HOLD THE BALANCE WEIGHTS. THIS SCREW IS IN ALLOYED STEEL (CODE BC- STEEL 35NC6). REMOVING THE SCREW FROM THE TIP OF THE TAIL ROTOR BLADE IN FOR A NORMAL BALANCING CHECK, THE SCREW BROKE WITH A PART OF IT IN THE BLADE TIP. WHEN REMOVING THE SCREW AN EXTRACTOR BROKE ALSO IN THE BLADE TIP. THE BREAKING OF SCREW WAS DUE TO CORROSION. THERE IS NO WAY TO PREVENT CORROSION OF THIS SCREW INDICATED IN THE MM OF ASE350 AND MM AS355. AT THE INSTALLATION OF THE SCREW AS PRESCRIBED IN MM, IT IS PROHIBITED TO PROTECT THE SCREW WITH GREASE, MASTINOX, ETC.									

***** DENOTES SIGNIFICANT OCCURRENCE

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6520	992BH	SNIAS				LAMIFICATION	TORN	602	3/3/98
HCMA	2889	AS350B2				350A33215300	REAR ROTOR		HAIHCMA0178
REAR ROTOR LAMIFICATION IS TORN BEYOND LIMITS AND THERE IS NO "J" GAP.									

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7200 HDNA	109MM 7279	AGUSTA A109A2	ALLSN 250C20			ENGINE	FLAMED OUT NR 1	2656	12/15/97 98ZZZX1028
SHORTLY AFTER TAKEOFF, THE NR 1 ENGINE 'FLAMED OUT'. THE AIRCRAFT WAS FLOWN ON TO AIRPORT AND LANDED ON ONE ENGINE WITHOUT INCIDENT. UPON INVESTIGATION, THE FRONT SUPPORT OF NR 1 ENGINE WAS FOUND WET. THIS INDICATES WATER OR ICE WAS PRESENT IN INTAKE. AIRCRAFT WAS INSPECTED AND RETURNED TO SERVICE.									
7313		AGUSTA A109A	ALLSN 250C20B		6890917	FILTER 47086	COLLAPSED FUEL NOZZLE	2656 1284	12/15/97 98ZZZX1030
FUEL NOZZLE FILTER IS PARTIALLY COLLAPSED DUE TO FOREIGN OBJECT INSERTED INTO INLET.									
8530	3656C 3010304	AIRTRC AT301	PWA R1340AN1			CYLINDER 399359	CRACKED NR 2	559 49	2/18/98 98ZZZX1000
THE NR 2 CYLINDER WAS FOUND CRACKED FROM THE REAR SPARK PLUG PORT TO THE FRONT SPARK PLUG PORT ON THE UPPER INTAKE SIDE OF THE CYLINDER HEAD.									
8530	5611D BA316	BEECH E18S	PWA R985AN14B			CYLINDER	SEPARATED NR 4	2/16/98 70	98ZZZX1031
THE CYLINDER HEAD SEPARATED FROM THE BARREL COMPLETELY THREE COOLING FINS DOWN FROM THE SPARK PLUG HOLE. THE CYLINDER REMAINS IN PLACE. DUE TO ENGINE ROUGHNESS, A PRECAUTIONARY SHUT DOWN WAS PERFORMED. AD 78-08-07 APPLIES TO THIS CONDITION. SUBMITTER RECOMMENDED INSPECTION FOR BLOW-BY BEFORE EACH FLIGHT INSTEAD OF THE 100-HOUR INTERVAL PER AD.									
7310 HEEA	1078D 45397	BELL 206L1				FITTING 206063637001	CORRODED FUEL MANIFOLD	3/3/98	HEEA0013111
FUEL MANIFOLD FITTING ASSY. HAS EXCESSIVE CORROSION ON EARS OF MANIFOLD AROUND BOLT HOLES. REPLACED WITH SERVICEABLE PART.									
7314 HEEA	31077 51520	BELL 206L3				FUEL PUMP 3881005	WORN ENG FUEL	6031	3/4/98 HEEA0013187
FUEL PUMP DRIVE SHAFT, SHOW SIGNS OF STEP WEAR ON SPLINES.									
7414	97428 15285774	CESSNA 152	LYC O235N2C		SLICK M4381	COIL M3975	FAILED ENGINE MAG	500	2/27/98 98ZZZX1020
MAG COIL AT 500 HOURS BURNED THROUGH ON THE OPPOSITE SIDE OF HIGH TENSION LEAD. HAVE TO PULL COIL OUT TO SEE DAMAGED SPOT. ENGINE LOST POWER, TOOK MORE MANIFOLD PRESSURE TO MAINTAIN SAME RPM.									
8520 T4CA	269JH 402B1213	CESSNA 402B	CONT TSIO520E			ROD BEARING SA630R26	FAILED LT ENG NR 6 CYL	2/12/98 1314	98ZZZX1012
LEFT ENGINE SPUN NR 6 CYLINDER ROD BEARING ON TRIP BACK FROM NASSAU. ENGINE WAS OVERHAULED BY T.W. SMITH ENGINE. THE ENGINE HAD 1,313.9 HOURS SINCE OVERHAUL.									
7320 CSLR	195ME 5250110	CESSNA 525	WILINT FJ44			ADAPTER 50575	WORN START NOZZLE	1408	1/21/98 98ZZZX1037
DURING ROUTINE INSPECTION CHECK 2, START NOZZLE ADAPTER WAS INSPECTED PER WILLIAMS ROLLS ROYCE FJ44-1A MM FOR DEFECTS. FRETTING WEAR OF .025 INCH WAS NOTED IN ZONE B(TIP) OF START NOZZLE, .020 INCH IS MAX SERVICE LIMIT FOR WEAR IN THIS AREA. INITIAL DISCOVERY OF WEAR WAS AT LAST ENGINE CHECK 1 INSPECTION. NO PREVIOUS WEAR NOTED PRIOR. CYCLES, 1,566.									
8530 PNSA	741 B97	GRUMAV G21A	PWA R985*			CYLINDER	SEPARATED LT ENGINE	2/20/98	PNSA980204
LT ENGINE STARTED RUNNING ROUGH AND LOST POWER, RETURNED TO BASE. FOUND CYLINDER SEPARATED FROM CASE. REPLACED ENGINE.									

***** DENOTES SIGNIFICANT OCCURRENCE

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7322	4561H	MOONEY	LYC		BENDIX	SERVO	CORRODED	1196	12/20/97
OF1R	240767	M20J	IO360A3B6			RSA5AD1	FUEL INJECTOR		98ZZZX1001
*****	CORROSION FOUND INSIDE FUEL INJECTOR SERVO DIAPHRAGM SECTION WAS IMPEDING MOVEMENT OF DIAPHRAGM RESTRICTING FUEL FLOW. SUBMITTER SUSPECTED WATER LAYING IN THIS AREA CORRODING SMALL SECTION OF INJECTOR HOUSING CAUSED GROWTH OF CORROSION DEPOSIT. LAB REPORT ON CORROSION SENT TO PHILA FSDO.								
8550	9VZ	PIPER	LYC		CHAMPION	FILTER	MALFUNCTIONED	50	2/6/98
	448195002	PA44180	O360E1A6			CH48103	ENGINE OIL		98ZZZX1032
	FILTER WAS REMOVED FOR A 100-HOUR INSPECTION. PRIOR TO CUTTING THE FILTER OPEN, A FOREIGN MATERIAL WAS VISIBLE ON THE OPENING OF THE FILTER. FURTHER INSPECTION REVEALED THE FOREIGN MATERIAL WAS A SEAL USED BETWEEN THE TOP OF THE FILTER CAN AND THE ELEMENT. AS A RESULT, UNFILTERED OIL COULD BE RETURNING TO THE ENGINE ALONG WITH THIS LOOSE MATERIAL.								

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
2330 HEEA	1072T 45385	BELL 206L1				PA AMPLIFIER AA20030	DEFECTIVE CABIN		3/3/98 HEEA0013132
PA AMPLIFIER LOW VOLUME.									
3416 HEEA	5742N 45477	BELL 206L1				ALTIMETER 59341	STUCK COCKPIT		3/4/98 HEEA0013229
ALTIMETER NEEDLE STUCK AT 54,000 FEET.									
3421 HEEA	5014V 45217	BELL 206L1				HORIZON GYRO 500DCF288	FAILED COCKPIT		3/4/98 HEEA0013196
HORIZ GYRO PRECESSES.									
3422 HEEA	1073W 45386	BELL 206L1				DIRECTION GYRO 2891ESR	FAILED COCKPIT		3/4/98 HEEA0013259
DG LOCKS UP; DOES NOT MOVE.									
3422 HEEA	1078C 45392	BELL 206L1				DIRECTION GYRO 2891ESR	DEFECTIVE COCKPIT		3/4/98 HEEA0013257
DIR GYRO LIGHTING IS OUT.									
3422 HEEA	5745N 45489	BELL 206L1				DIRECTION GYRO 2891ESR	MALFUNCTION COCKPIT		3/4/98 HEEA0013258
DIR GYRO INTERMITTENTLY GETS FLAG INDICATOR.									
3424 HEEA	6251Y 51556	BELL 206L3				INDICATOR A593002	FAILED COCKPIT		3/4/98 HEEA0013235
TURN & BANK INDICATOR NEEDLE DOES NOT DEFLECT IN EITHER DIRECTION.									
3425 HEEA	2756P 2655	BELL 206B3			KI525A	INDICATOR 066304601	FAILED COCKPIT		3/4/98 HEEA0013206
DEVIATION NEEDLE STICKS.									
3452 HEEA	2275Y 3626	BELL 206B3			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013135
TRANSPONDER ON/OFF SWITCH LOOSE. PERFORMED PRELIMINARY INSPECTION. FOUND ON/OFF SWITCH BROKEN. REPLACED FACEPLATE ASSY, REPAIRED. ADJUSTED TO SPECS. BENCH CHECK GOOD.									
3452 HEEA	406EH 45183	BELL 206L1			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013125
TRANSPONDER REPORTED INOPERATIVE. NO CODE OR ALTIMETER READOUT.									
3452 HEEA	3108E 51498	BELL 206L3			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013116
ATC REPORTED TRANSPONDER AS INOPERATIVE. FOUND WEAK POWER OUT. REPLACED CAVITY OSCILLATOR V101. REPAIRED. REPLACED DETERIORATED RESISTOR R477 AND PHOTOCCELL V301 DUE TO WEAK REPLY LIGHT. REPAIRED. ADJUSTED FREQUENCY. BENCH CHECK GOOD.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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3453 HEEA	5017G 45228	BELL 206L1			KLN88	LORAN 066402600	FAILED COCKPIT		3/3/98 HEEA0013130
	KLN88 NO DISPLAY.								
3457 HEEA	22425 45743	BELL 206L1			GPS 150	GPS 0110005400	FAILED COCKPIT		3/3/98 HEEA0013124
	COCKPIT GPS HAS NO DISPLAY.								
3457 HEEA	4180F 51469	BELL 206L3				RECEIVER 13824120234	FAILED COCKPIT GPS		3/3/98 HEEA0013123
	GPS RECEIVER LOST ALL STATIONS. "WPT" BUTTON BACKLIGHTING INTERMITTENTLY.								
2310 HEEA	5736D 31135	BELL 212			KCU951	CONTROL 064101600	DEFECTIVE COCKPIT HF		3/4/98 HEEA0013175
	DISPLAY HARD TO READ AND CHANNELS INTERMITTENTLY.								
3452 HEEA	CGOFL 53130	BELL 407			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/4/98 HEEA0013194
	KT76 TRANSCEIVER DRAWS EXCESSIVE CURRENT.								
3452 HEEA	406PH 53198	BELL 407			KT76	TRANSPONDER 066106200	DEFECTIVE COCKPIT		3/3/98 HEEA0013119
	BENCH CHECK NEEDED. REPLACED WEAK V301 PHOTODETECTOR, DETERIORATED R477 RESISTOR, INSTALLED MISSING IDENT PUSH BUTTON AND INSTALLED HEAT SINK FOR Q415. ADJUSTED AS NEEDED AND BENCH CHECK GOOD.								
3452 HEEA	406PH 53198	BELL 407			KT76	TRANSPONDER 066106200	FAILED COCKPIT		3/3/98 HEEA0013109
	TRANSPONDER WILL NOT IDENT AND WILL NOT TEST. PERFORMED PRELIMINARY INSPECTION AND FOUND SWITCH BOARD INTERMITTENT. REPLACED SWITCH BOARD. ALSO FOUND PHOTOCELL NOT DIMMING PROPERLY. REPLACED PHOTOCELL. UNIT BENCH CHECK GOOD.								
2312 HEEA	7128R 36007	BELL 412			KFS598	CONTROL 071121524	FAILED COCKPIT		3/3/98 HEEA0013117
	DISPLAY STAYS BRIGHT. PERFORMED PRELIMINARY INSPECTION. REPLACED V301 PHOTOCELL. REPAIRED. ALSO INSTALLED P201 HEADER, AND APPLIED HUMISEAL. CHECKED 5V LIGHTING. BENCH CHECK GOOD.								
3421 HEEA	107X 33113	BELL 412				INDICATOR 222375033103	PRECESSES COCKPIT		3/4/98 HEEA0013219
	ATTITUDE INDICATOR EXCESSIVE PRECESSING IN PITCH AND ROLL.								
3425 HEEA	3893S 33022	BELL 412				ATT INDICATOR 5040017901	FAILED COCKPIT		3/3/98 HEEA0013136
	POWER FLAG WON'T PULL - DOESN'T APPEAR TO COME ON. REPLACED WITH SERVICEABLE PART.								
3425 HEEA	2148K 36001	BELL 412				INDICATOR 1113025	FAILED COCKPIT		3/4/98 HEEA0013222
	HSI INDICATOR COURSE SET INOPERATIVE.								
3425 HEEA	6559Z 36019	BELL 412				HSI 1258103	FAILED COCKPIT		3/4/98 HEEA0013221
	HSI HEADING SET INOPERATIVE.								

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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2562 HEEA	54191 S804	BOLKMS BO105S			NARCO	ELT ELT910	DEFECTIVE COCKPIT		3/4/98 HEEA0013241
NARCO ELT TRANSMITS SIGNAL INADVERTANTLY.									
3444 HEEA	137AE S851	BOLKMS BO105S				ANTENNA 071111400	DEFECTIVE RADAR ALT		3/4/98 HEEA0013205
ERRATIC ALTIMETER OPERATION.									
3453 HEEA	721MB S752	BOLKMS BO105S				LORAN 4530103	FAILED COCKPIT		3/4/98 HEEA0013180
WHEN SCROLLING IN AUX OR NAV MODE UNIT INTERMITTENTLY LOSES DISPLAY AND STARTS OVER. INTERMITTENT IN CDI MODE.									
3454 HEEA	205UC S668	BOLKMS BO105S			KING KI229	RMI 066303800	FAILED COCKPIT		3/3/98 HEEA0013133
WILL NOT SLAVE WITH HSI.									
3454 HEEA	818SH S753	BOLKMS BO105S			KING KI229	RMI 066303800	FAILED COCKPIT		3/4/98 HEEA0013255
RMI INOPERATIVE.									
3457 HEEA	624MB S751	BOLKMS BO105S				GPS 0110005400	FAILED COCKPIT		3/4/98 HEEA0013190
INNER KNOB ON GPS WILL NOT SELECT CORRECT CHOICE INTERMITTENTLY.									
3457 HEEA	624MB S751	BOLKMS BO105S				GPS 0110005400	FAILED COCKPIT		3/2/98 HEEA0013108
GPS DISPLAY FADES OUT AFTER 3 TO 4 MINUTES. NOTE: FADES MORE AT NIGHT. TIME SINCE REPAIR 0:00.									
3457 HEEA	8199J S826	BOLKMS BO105S				GPS 0845000000	FAILED COCKPIT		3/4/98 HEEA0013182
GPS INOPERATIVE.									
3457 HEEA	135AE S838	BOLKMS BO105S				GPS 0110005400	FAILED COCKPIT		3/4/98 HEEA0013189
GPS INTERNAL BATTERY IS DEAD.									
2312 HEEA	401PH 7050	BOLKMS BK117A3				RECEIVER 40001452500	FAILED COCKPIT		3/4/98 HEEA0013183
DOES NOT TRANSMIT.									
3424	988AE 441075	CESSNA 441				TURN CORRINATOR 1394T100	FAILED COCKPIT	1611	2/23/98 98ZZZX1006
UNDER NORMAL NIGHT FLIGHT OPERATIONS, PILOT SMELLED LIGHT SMOKE IN COCKPIT. RETURNED TO BASE, FOUND TURN CORRINATOR INOPERABLE.									
3425 PNSA	441LL 441139	CESSNA 441				HSI CARD 52D1372335	FAILED LEFT		2/5/98 PNSA980206
CAPTAINS HSI CARD DID NOT TURN DURING TAXI. REPLACED HSI, OPS CHECK OK.									

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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2210 HEEA	1546K 760082	SKRSKY S76A				VERTICAL GYRO 7660002113103	MALFUNCTIONED AFCS		3/4/98 HEEA0013230
VERT GURO CAUSES AFCS TO PORPOISE.									
2210 HEEA	3122H 760233	SKRSKY S76A			769000180210	POTENTIOMETER 7683431	FAILED AUTO PILOT	384	3/4/98 HEEA0013192
ACTUATOR DOES NOT MOVE. INSPECTED BY ACCESSORY OVERHAUL SHOP AND FOUND ONE EACH POTENTIOMETER CHECKED BAD, HAD NO READING ON TEST.									
2370 HEEA	706AE 760275	SKRSKY S76A				CVR 9806020023	FAILED COCKPIT	655	3/3/98 HEEA0013121
CVR WILL NOT TEST.									
3421 HEEA	5426U 760167	SKRSKY S76A				VERTICAL GYRO 7660002113102	FAILED COCKPIT		3/4/98 HEEA0013231
VERT GYRO MALFUNCTION. TAKES 5 TO 7 MINUTES TO PULL FLAG ON ADI.									
3421 HEEA	5426U 760167	SKRSKY S76A				VERTICAL GYRO 7660002113102	DEFECTIVE COCKPIT		3/4/98 HEEA0013232
ADI WILL FALL 90 DEGREES.									
3425 HEEA	4253S 760035	SKRSKY S76A				INDICATOR 1113025	DEFECTIVE COCKPIT		3/4/98 HEEA0013223
HSI INDICATOR COURSE WINDOW DOES NOT MATCH YELLOW NEEDLE.									
3452 HEEA	31219 760230	SKRSKY S76A				TRANSPONDER 066104100	FAILED COCKPIT		3/4/98 HEEA0013184
TRANSPONDER WILL NOT TRANSMIT.									
3453 HEEA	707AE 760276	SKRSKY S76A				LORAN 453105004	FAILED COCKPIT		3/3/98 HEEA0013127
LORAN WILL NOT SELF TEST OR ANY FUNCTION LIGHTS WHEN TURNED ON.									
3454 HEEA	22342 760096	SKRSKY S76A				CONTROL 071121627	FAILED COCKPIT NAV		3/4/98 HEEA0013186
NAV CONTROL WILL NOT TURN OFF WITH ON/OFF SWITCH.									
3454 HEEA	15460 760223	SKRSKY S76A				RECEIVER 066107800	INTERMITTENT VHF NAV		3/4/98 HEEA0013191
PANEL LIGHTS ILLUMINATE INTERMITTENTLY.									
3454 HEEA	31217 760229	SKRSKY S76A			KDA697	INDICATOR 071107600	FAILED COCKPIT		3/4/98 HEEA0013185
NO. 2 VOR - GREEN NEEDLE DOESN'T POINT TO STATION BOTH SIDES.									
2562 HEEA	350BZ 2653	SNIAS AS350B2			NARCO	ELT ELT910	FAILED COCKPIT		3/4/98 HEEA0013242
ELT FAILED "G" SWITCH TEST.									

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS

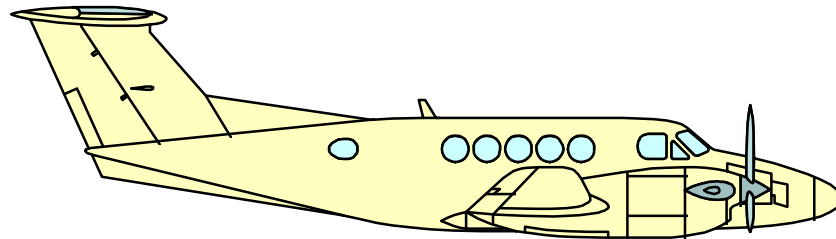
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6114	8470Y	PIPER				ZERK	LEAKING		2/4/98
PNSA	328206012	PA32301					PROP HUB		PNSA980209
DURING CRUISE, A FILM OF GREASE DEVELOPED ON WINDSHIELD. RETURNED TO BASE. REPLACED LEAKING GREASE ZERK, OPS CHECK OK.									

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS)



INTERNATIONAL SERVICE DIFFICULTY REPORT



INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

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3213		AYRES S2RNORMAL				TUBE 5011613	CORRODED SHOCK STRUT	2328	4/15/93 CA930430201
(CAN) SHOCK STRUT ASSEMBLIES REMOVED TO INSTALL NEW BISCUITS. WHEN STRUTS DISASSEMBLED TUBES WERE FOUND CORRODED.									
2430		BBAVIA 8GCBC	LYC O360C2B			WIRE 99	CHAFED BATTERY	4740	3/9/93 CA930318404
(CAN) WIRE FROM BATTERY SOLENOID TO STARTER SOLENOID IS WORN WHERE IT TOUCHED BELLY PANEL FROM YEARS OF SAGGING.									
2720		BBAVIA 8GCBC	LYC O360C2B			PEDAL 315371	BROKEN RUDDER RT FRONT	4740	3/9/93 CA930318406
(CAN) RUDDER PEDAL BROKE WHEN PRESSURE APPLIED TO ENGAGE PARKING BRAKE.									
2730		BBAVIA 8GCBC				CABLE 31072	FRAYED ELEVATOR UP	5073	4/6/93 CA930416411
(CAN) ELEVATOR CABLE FOUND FRAYED AT REAR FUSELAGE PULLEY.									
2730		BBAVIA 8GCBC	LYC O360C2B			CABLE 31072	FRAYED AFT ELEV. PULLEY	1887	4/13/93 CA930422213
(CAN) BROKEN WIRES FOUND ON UP ELEVATOR CABLE, JUST AFT OF REAR FUSELAGE PULLEY. WITH TENSION ON CABLE AND ITS POSITION, BROKEN WIRES ARE DIFFICULT TO DETECT. HOWEVER, WITH TENSION RELAXED AND CABLE BENT DOWN AROUND PULLEY, BROKEN WIRES WERE EASILY DISCOVERED.									
2750		BBAVIA 8GCBC				CABLE 19023	FRAYED LT FLAP PULLEY	1882	4/1/93 CA930407203
(CAN) LEFT FLAP CABLE FOUND FRAYED WHERE IT PASSES OVER FUSELAGE PULLEY IN WING ROOT. THIS SDR PROMPTED BY ARTICLE IN FEEDBACK 4/92.									
2810		BBAVIA 8GCBC	LYC O360C2B			TANK 71494	CRACKED FUEL LT	4740	3/9/93 CA930318405
(CAN) AIRCRAFT LEAKING FUEL FROM CRACK IN LT OUTBOARD FUEL TANK.									
5551		BBAVIA 8GCBC	LYC O360C2B			BRACKET 22123	BROKEN REAR STAB	4740	3/9/93 CA930318407
(CAN) BOTH UPPER AND LOWER BRACKETS BROKEN OFF OF REAR HORIZONTAL STABILIZER ATTACHMENT TUBE. AIRCRAFT TT: 5,591 HOURS.									
5711		BBAVIA 8GCBC	LYC O360C2B		71462	SPAR 5370	CRACKED WING	4741	3/9/93 CA930318408
(CAN) SMALL COMPRESSION CRACK FOUND OUTBOARD OF SPAR REINFORCING PLATE ON TOP OF SPAR AND WORKING DOWN SPAR FACE. ALSO, AN 8 FOOT LONGITUDINAL CRACK RUNNING WITH THE GRAIN FROM THE REINFORCING PLATE OUTBOARD TO THE TIP. AIRCRAFT TT: 5,591 HOURS.									
3221		BEECH A100			5082020445	LUG	CORRODED NLG DRAG BRACE		3/9/93 CA930323106
(CAN) NOSE GEAR UPPER HOUSING (BRACE) FOUND CORRODED AT DRAG BRACE ATTACH POINT. DAMAGED BEYOND REPAIRABLE LIMITS. SUBMITTER NOTES PROBLEM WAS MAGNESIUM BRACE AND NOW REPLACED WITH ALUMINUM.									
3233		BEECH A100				MOTOR 51200040	SHORTED MLG		3/15/93 CA930330203
(CAN) LANDING GEAR INOPERATIVE. SHEET METAL SCREW FOUND JAMMED BETWEEN MOTOR CONTACTS NOT ALLOWING MOTOR TO CYCLE GEAR DOWN. FURTHER INSPECTION FOUND ALL NINE SCREWS ON BASE GUIDE PLATES LOOSE, 3 SCREWS WERE TOO SHORT.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

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5530		BEECH 200BEECH				ANCHOR NUT NAS680416	MISSING VERTICAL STAB	5131	3/10/93 CA930326209
(CAN) FLIGHT CONTROLS HAD BEEN REMOVED FOR AIRCRAFT REFINISH. ON INSTALLATION OF RUDDER, THE ANCHOR NUT LOCATED ON FORWARD FACE OF VERTICAL STAB AFT SPAR WAS MISSING. THIS IS RUDDER UPPER HINGE ATTACH POINT. HINGE P/N 101-640014-15. NO ACCESS TO REPLACE NUT. BEECH ADVISES THAT THERE HAVE BEEN OTHER OCCURRENCES.									
5720		BEECH B200				DUCT	CRACKED RT WING	6470	3/1/93 CA930326701
(CAN) AIR SCOOP DUCT IN LEADING EDGE OF RT WING, INBOARD OF NACELLE CRACKED. ACFT TT: 10,562 HOURS.									
5720		BEECH A24R				DOUBLER 1694000137	DAMAGED RT FWD WING ATTH	2650	3/21/93 CA930331419
(CAN) INSP IAW AD 73-20-07R2 AND BEECH SI 0042-031R2, DAMAGE FOUND ON DOUBLER AND BRACKET. ATTACH BOLT NOT TORQUED ALLOWING GROOVE TO WEAR INTO DOUBLER. WASHER ALSO WORE A GROOVE. BRACKET IS P/N 169-400013-6. ACFT TT: 2,972 HOURS.									
3230		BEECH C90A			1013841377	TERMINAL BLOCK M81714	LOOSE TB 153	301	3/26/93 CA930405301
(CAN) LOOSE CONTACTS ON TB 153 RESULTED IN AIRCREW BEING UNABLE TO EXTEND LANDING GEAR ELECTRICALLY.									
7312		BEECH C90A	PWA PT6A21			HEATER 3032710	MALFUNCTION FUEL HEATER	51	2/3/93 CA930322304
(CAN) DURING CRUISE, CREW REPORTED POWER FLUCTUATIONS AND TERMINATED THE FLIGHT. ON GROUND RUN-UP, THE TORQUE, N1 AND FUEL FLOW WERE FLUCTUATING. TROUBLESHOOTING OF ENGINE COMPONENTS LED TO REPLACEMENT OF OIL/FUEL HEATER WHICH RECTIFIED THE PROBLEM. TROUBLESHOOTING PROCEDURE IS OUTLINED IN MAINTENANCE MANUAL.									
2720		CESSNA 150M				CABLE 040010750	WORN RUDDER	3382	2/24/93 CA930326702
(CAN) RT AND LT RUDDER CABLES FOUND FRAYED AND WORN AT AFT PULLEY, STA 187.0 AND ALSO AT FORWARD PULLEY, STA 21.0.									
5341		CESSNA 150B				BEARING BLOCK 0411129	CORRODED WING PICKUP	3995	5/4/93 CA930511404
(CAN) HEAVY CORROSION FOUND BETWEEN TWO LEGS OF BEARING BLOCK. PART CAN ONLY BE INSPECTED WHEN WINGS REMOVED.									
5523		CESSNA 150L			CESSNA	RIVETS 04125272	WORKED TRIM TAB HORN		4/15/93 CA930430409
(CAN) CHERRY MAX RIVETS SECURING PLATE TO ELEVATOR TRIM TAB HAD WORKED AND WERE BEING PULLED OUT OF TAB. PLATE COULD BE LIFTED .0937 INCH OFF OF TAB.									
3211		CESSNA 170B				BRACKET 071349561	CORRODED LT MLG SUPPORT	3479	3/13/93 CA930323104
(CAN) INTERGRANULAR CORROSION FOUND ON LOWER WEB OF LT MLG SUPPORT BRACKET.									
2510		CESSNA 172M			CESSNA	PIN MS203922C11	WORN CREW SEATS	5278	4/20/93 CA930430412
(CAN) PINS AT BOTTOM OF PILOT AND COPILOT SEAT BACKS GETS WORN AS SEATS ARE ADJUSTED. A BELLCRANK RUBS ON THE PINS CAUSING THE WEAR. LT PIN WORN 50 PERCENT AND RT 80 PERCENT THROUGH. IF PIN BREAKS, SEAT COULD FALL BACK.									
2823		CESSNA 172M			0513120200	O-RING NAS1593010	FLAT FUEL SELECTOR	704	3/20/93 CA930331410
(CAN) FUEL SELECTOR FOUND WET WITH FUEL. HEAVY FUEL STAINS ON BELLY EXTERIOR AS WELL. SELECTOR O-RING REPLACED. IN ADDITION, STEM HAD SOME DIRT ACCUMULATION AT O-RING AREA. ONLY 2ND TIME SUBMITTER HAD SEEN THIS. SELECTOR APPARENTLY TRICKY TO ASSEMBLE. SUBMITTER NOTES IT IS GOOD IDEA TO REPLACE PIN. P/N NAS561P3-8.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT (cont'd)

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3220		CESSNA 172P				FITTING 05430161	LOOSE NOSE GEAR LOWER	8117	3/29/93 CA930415517
(CAN) TWO BOLTS HOLDING FITTING LOOSE AND ALSO ALL THE RIVETS HOLDING FITTING WERE LOOSE OR SHEARED.									
3221		CESSNA 172Q				FITTING 95430131	CRACKED NLG FIREWALL	2124	3/23/93 CA930415503
(CAN) AFTER CHECKING RIVET SHEAR AS NOTED IN FEEDBACK 4/92, FITTING FOUND CRACKED. CRACK 1.50 INCHES LONG.									
5753		CESSNA 172M				ROLLER ASSY 0523920	CRACKED FLAPS		3/12/93 CA930323105
(CAN) ROLLER BEARING ASSY OF BOTH FLAPS AT OUTBOARD REAR POSITION FOUND CRACKED AXIALLY ACROSS ROLLER FACE. THIS PROBLEM WAS DISCOVERED WHEN A SLIGHT GRINDING NOISE WAS HEARD DURING GROUND OPERATION. ONE ROLLER WAS PARTIALLY SEIZED. ONE OTHER AIRCRAFT, A 172, HAD BEGINNINGS OF SIMILAR PROBLEM. ACFT TT: 8,607 HOURS.									
7810		CESSNA 172	LYC O320E2D			RISER 17540081	BROKEN EXHAUST NR 2	5703	3/26/93 CA930407211
(CAN) WHILE DOING TOUCH AND GOES, PILOT HEARD LOUD ABNORMAL NOISE FROM ENGINE. AIRCRAFT LANDED. NR 2 EXHAUST RISER FOUND BROKEN.									
7930		CESSNA 172M				OIL LINE 050011896	WORN FIREWALL	4057	3/23/93 CA930406301
(CAN) OIL PRESSURE LINE FOUND WORN TO LEAKING POINT BY CHAFING ON CABIN HEAT AND CARBURETOR HEAT CABLE AT FIREWALL. THREE OTHER SIMILAR AIRCRAFT CHECKED AND CLEARANCE OK. A USED PART WAS ORDERED AND FOUND WORN IN SAME AREA.									
2820		CESSNA 180A				FUEL LINE 0500106153	CHAFED WING TO CAB FLOR	4999	4/20/93 CA930426306
(CAN) FUEL LINE LOCATED ON LEFT SIDE FROM FUEL BLADDER IN WING DOWN DOOR FRAME TO UNDER FLOOR AREA FOUND CHAFED ALMOST THROUGH. CHAFING CAUSED BY LOCKWIRE FROM FLAP CABLE TURNBARREL WHICH IS ADJACENT TO FUEL LINE IN DOOR FRAME. WHEN FLAPS SELECTED FROM 15 TO 30 DEGREES, CHAFING OCCURRED. DAMAGE COULD NOT BE SEEN, BUT COULD BE FELT BY RUNNING HAND ALONG LINE.									
5551		CESSNA 180A				REINFORCEMENT 07321014	CRACKED STAB HINGE	5279	3/15/93 CA930331407
(CAN) CRACK FOUND IN BOTTOM OUTBOARD CORNER OF STAB HINGE REINFORCEMENT. PART TT: 5,394 HOURS.									
7920		CESSNA R182	LYC O540J3C5			HOSE S123640140	RUPTURED ENG OIL	933	4/20/93 CA930506602
(CAN) DURING FLIGHT, OIL PRESSURE WAS ERRATIC FLUCTUATING 30 TO 35 PSI. GROUND INSPECTION REVEALED OIL ON BELLY AND ON RIGHT SIDE OF ENGINE COWL. FURTHER INVESTIGATION REVEALED THE OIL PRESSURE HOSE FROM THE FIREWALL TO THE ENGINE HAD RUPTURED.									
2730		CESSNA A185F				CABLE 051010525	CHAFED ELEVATOR LOWER	2578	4/17/93 CA930426604
(CAN) LOWER ELEVATOR CONTROL CABLE FOUND BADLY CHAFED WITH BROKEN STRANDS. LOCATED AT BULKHEAD STA 140.00, AGAINST RUB STRIP P/N 0712201-2.									
2730		CESSNA A185F				CABLE 051010525	CHAFED ELEVATOR LOWER	3359	4/17/93 CA930426603
(CAN) LOWER ELEVATOR CONTROL CABLE FOUND BADLY CHAFED WITH BROKEN STRANDS. LOCATED AT BULKHEAD STA 140.00 AND AGAINST RUB STRIP P/N 0712201-2.									
2810		CESSNA A185F				FUEL CELL 12000654	DETERIORATED RT WING	6779	4/24/93 CA930430202
(CAN) FUEL NOTED SEEPING ALONG TRAILING EDGE OF RT WING. WHEN CELL TOPPED UP WITH FUEL, LEAK FROM UPPER AREA OF CELL. NOTHING OBVIOUS FOUND ON TANK AND AREA OF LEAK NOT IDENTIFIED BUT AGE AND DETERIORATION LIKELY KEY FACTOR.									

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3242		CESSNA A185F				TORQUE PLATE B301072	CRACKED RT BRAKE	6740	3/15/93 CA930330207
(CAN) LOUD SQUEAKING NOISE HEARD FROM RT BRAKE. RT TORQUE PLATE FOUND CRACKED WHERE BRAKE CALIPER INSTALLED. TORQUE PLATE RUBBING AGAINST BRAKE DISC CAUSING NOISE. SUBMITTER NOTED THAT THIS PROBLEM HAD BEEN SEEN BEFORE. LUG THAT USUALLY CRACKS IS THE TOP ONE.									
3246		CESSNA A185E			FLUIDYNE	AXLE	BROKEN RT SKI		2/17/93 CA930326206
(CAN) ON LANDING, RT SKI STRUCK HARD PACKED SNOW AND SKI AXLE FRACTURED. RT LANDING GEAR SPRING ASSY COLLAPSED DAMAGING RIGHT WING TIP, FUSELAGE SKIN, AND LANDING GEAR SUPPORT STRUCTURE.									
3246		CESSNA U206F			MCAULY C1630040101	HUB D30259	BROKEN LT WHEEL		2/15/93 CA930322301
(CAN) LEFT SIDE WHEEL FAILED. OUTER FLANGE ATTACH BOLTS BROKE OUT OF INNER HUB ASSY. NO BOLTS FAILED. RT WHEEL SHOWED CRACKS AT BOLT HOLES OF INNER HUB. BOLT TORQUE AT UNDAMAGED RT WHEEL SHOWED OK. NOT POSSIBLE TO CHECK LT DAMAGED BOLTS.									
5751		CESSNA U206				HINGE ASSY 122005311	CRACKED AILERON	7736	3/29/93 CA930416409
(CAN) AILERON HINGES FOUND TO HAVE SMALL CRACKS IN RADIUS OF MOUNTING FLANGE. BOTH OUTBOARD LEFT AND RIGHT. ALSO, P/N'S 122005312, 1220052-11 AND -12.									
2750		CESSNA 208B				FLAP	FAILED STOP SWITCH		3/30/93 CA930408202
(CAN) WHEN FLAPS LOWERED, BANG HEARD AND FLAPS BECAME INOPERATIVE. STANDBY FLAPS OK AND WHEN CB RESET, NORMAL FLAPS OK. INVEST FOUND FLAP ACTUATOR BOTTOMING OUT IN FLAPS DOWN POSITION AND THAT FLAPS WERE 4 TO 5 DEGREES SHORT OF FULL TRAVEL. RIGGING DID NO GOOD. DURING RIGGING, FLAPS OVERRAN UPSTOP SWITCH AND DAMAGED ACTUATOR. SUBMITTER SAYS MOST LIKELY CAUSE OF FLAP BOTTOMING IS IF FLAP OVERRAN DOWN SWITCH ON A "STANDBY FLAP TEST", WARPING ACTUATOR FLAP SUPPORT, THUS, ALTERING THE RIGGING SO THAT FLAPS BOTTOMED BEFORE MAKING LIMIT SWITCH IN NORMAL OPERATION. FULL FLAPS SELDOM USED.									
2750		CESSNA 208B				BRACKET 26221101	LOOSE FLAPS LT	289	2/28/93 CA930326703
(CAN) FLAPS FOUND LOOSE. BOTH FLAP BELLCRANKS - INBOARD, WERE LOOSE. THIS WAS APPARENTLY CAUSED BY ELONGATION OF HOLES IN UPPER ATTACH BRACKETS.									
2750		CESSNA 208B				BELLCRANK DDA000284	BROKEN FLAPS	5806	2/20/93 CA930316601
(CAN) FLAPS SELECTED AT 115 KNOTS. FLAPS RETRACTED WITH A SUDDEN DOWNWARD DROP OF AIRCRAFT AS IF IN STRONG DOWNDRAFT CONDITIONS. RT INBOARD BELLCRANK FOUND IN 2 PIECES.									
5753		CESSNA 208B				BRACKET 26221101	LOOSE FLAPS LT	1175	2/28/93 CA930322302
(CAN) FLAPS FOUND LOOSE. BOTH FLAP BELLCRANKS - INBOARD, WERE LOOSE. THIS WAS CAUSED BY ELONGATION OF HOLES IN THE UPPER ATTACH BRACKETS. ALSO, RT BRACKET P/N 26221102 HAD ELONGATED HOLES. PART TOTAL CYCLES, 1,762. ACFT: 7,239 HOURS.									
5551		CESSNA 210L	CONT IO520L			BOLT AN509416R13	SHEARED STABILIZER	2430	3/17/93 CA930318401
(CAN) STABILIZER ATTACH BRACKET FOUND HELD IN PLACE BY ONLY ONE OF 3 BOLTS REQUIRED. PIECES OF THE 2 OTHER BOLTS FOUND IN FUSELAGE INDICATING THAT THEY HAD SHEARED. THE STABILIZER WAS SEPARATED FROM THE FUSELAGE ATTACH BY AS MUCH AS .150 INCH. THIS EXCESS PLAY TRANSMITTED STRESS TO THE DOUBLER PLATE, P/N 12121271 AT STA 209. RIVETS HAD BEEN LOOSENEED.									
5210		CESSNA 401				BEARING AVO472	BROKEN CABIN DOOR		3/12/93 CA930413412
(CAN) EXCESSIVE PLAY WOULD NOT ALLOW DOOR TO LATCH PROPERLY. HANDLE, SHAFT BEARING BROKEN. ACFT TT: 1,645 HOURS.									

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2750		CESSNA 402B				CABLE 50000083	BROKEN FLAP		3/16/93 CA930331408
(CAN) LEFT FLAP NOT FULLY EXTENDING CAUSING AN ASYMMETRICAL FLAP. FLAP EXTEND CABLE FOUND BROKEN.									
2752		CESSNA 402B				ACTUATOR 51152401	FAILED FLAPS		4/28/93 CA930511408
(CAN) FLAP ACTUATOR OPERATION NOISY WHEN FLAPS EXTENDED AFTER LANDING FLAPS FAILED TO OPERATE AGAIN. FLAPS REMAINED SYMMETRICAL.									
3010		CESSNA 404CESSNA			BFGOODRICH	DEICE BOOT	TORN WINGS		4/6/93 CA930422207
(CAN) INSTRUMENT REFERENCE LOSS IN IFR FLIGHT. VACUUM SYSTEM CHECKED. LARGE TEAR FOUND IN LEFT WING OUTBOARD DEICE BOOT AT OUTBOARD END. LEFT WING INBOARD ALSO HAD A SUBSTANTIAL LEAK. SMALL LEAKS FOUND IN OTHER BOOTS AS WELL.									
2620		CESSNA 441				BRACKET 57920013	CRACKED FIRE EXT LT	3596	4/14/93 CA930511402
(CAN) LT FIRE EXTINGUISHER BOTTLE BRACKET IN MLG WHEEL WELL FOUND CRACKED. IF LEFT UNNOTICED, DAMAGE TO GEAR AND RETRACTION MECHANISM COULD RESULT. BRACKET HAD BEEN PREVIOUSLY REPAIRED.									
2710		CESSNA 441				CABLE 581510326	WORN AIL LT&RT	1200	10/6/92 CA930511409
(CAN) LT AND RT AILERON CABLES FOUND WITH ABNORMAL WEAR, WHERE THEY PASS THROUGH A WING RIB.									
2721		CESSNA 500CESSNA			553320016	PUSHROD 556540060	CRACKED RUDDER TRIM		3/2/93 CA930331404
(CAN) RUDDER TRIM ROD FOUND CRACKED. LIKELY CAUSED BY WATER FREEZING IN TUBE. SPLIT ABOUT 4 INCHES LONG.									
2150		CESSNA 501				AIR CYCLE MACH 738384	FAILED CABIN AIR	12711	3/26/93 CA930413409
(CAN) AT FL 250, CAPTAIN NOTICED CABIN ALTITUDE WAS AT 3,500 FEET WITH LIMITED AIR FLOW INTO CABIN. WARMER CABIN WAS SELECTED AND CABIN ALTITUDE DECREASED TO 1,500 FEET. MAINTENANCE FOUND AIR CYCLE MACHINE HAD FAILED INTERNALLY. ACM WAS REPLACED. PART TC: 16,069.									
5510		DHAV DHC2MK1				FRONT SPAR C2TP57	CRACKED HORIZ STAB		4/30/93 CA930510406
(CAN) SPAR CRACKED AT ATTACHMENT POINTS. REF AD CF-91-42 SB 2/47.									
3213		DHAV DHC3				BOLT C3US10110	BROKEN RH SKI ATT BOLT		4/12/93 CA930426305
(CAN) BOLT APPEARS TO HAVE CRYSTALIZED DUE TO CYCLES LUBRICATION WASHED AWAY.									
3246		DHAV DHC3				BOLT C3US1563	BROKEN REAR A FRAME		3/29/93 CA930407301
(CAN) ON ROUGH LANDING, THE RIGHT SKI JAMMED AGAINST THE TIRE BRINGING THE AIRCRAFT TO AN ABRUPT STOP. THE REAR BOLT ON THE A-FRAME HAD FAILED CAUSING DAMAGE TO THE SKI TRIM UNIT.									
3246		DHAV DHC3				SWIVEL FITTING C3UF89	CRACKED FLOAT		3/13/93 CA930330101
(CAN) SWIVEL FITTING UPPER FRONT STRUT FOUND CRACKED ON FORWARD LUG.									

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2430		DHAV DHC6	PWA PT6A27			GROUND LEAD	LOOSE DC SYS		3/13/93 CA930330305
(CAN) NEW CIRCUIT BREAKER TRIPPED. POSITIVE LEAD GROUNDED TO CASE SURFACES NOT SEALED CAUSING INTERNAL LEAK. BOTH BRUSH SCREWS LOOSE. BRUSHES NOT RUN IN CAUSING HIGH CURRENT DRAW.									
2820		DHAV DHC6300	PWA PT6A27			TUBE ASSY C6PF11521	TWISTED 3 CELL INTERCONN		4/22/93 CA930428602
(CAN) ON INSPECTION TWO FUEL LINES ONE EACH SIDE COMING OUT OF 3 FUEL CELL FOUND TWISTED. LINE NOT HELD WHILE TIGHTENING NUT.									
2913		DHAV DHC6300	PWA PT6A27		DELCO 4100689004	HYD MOTOR A9373M1	OVERHEATED WINDINGS		3/25/93 CA930413408
(CAN) CREW NOTICED HYDRAULIC PUMP RUNNING CONTINUOUSLY AND SLIGHT ODOR OF SMOKE FOLLOWED BY VERY LITTLE SMOKE IN COCKPIT. HYDRAULIC CIRCUIT BREAKER PULLED, SMOKE STOPPED.									
3246		DHAV DHC6300	PWA PT6A27			WHEEL HALF 9543077	BROKEN OUTER		4/7/93 CA930430405
(CAN) TIRE DEFLATED DUE TO BROKEN WHEEL.									
5751		DHAV DHC6200				HINGE C6TEM101529	CORRODED LT ELEVATOR		3/9/93 CA930511107
(CAN) LT ELEVATOR OUTBOARD HINGE FITTING CORRODED BEYOND LIMITS.									
7810		DHAV DHC6300				DUCT ASSY 3012290	CRACKED LT ENG EXH	4896	3/4/93 CA930426605
(CAN) DURING CRUISE, THE FOLLOWING ENGINE PARAMETERS WERE NOTICED LT T5 INCREASED, LT WF INCREASED, LT TORQUE LOWER THAN RIGHT WITH TORQUE SETTINGS MATCHED THE LT POWER LEVER WAS ONE INCH AHEAD OF THE RIGHT HAND POWER LEVER AND THE LT T5 AND WF WERE HIGHER THAN RT ENGINE. AFTER THE FLIGHT MAINTENANCE FOUND THE LT ENGINE EXHAUST DUCT WAS CRACKED AND BUCKLED AND APPEARED TO HAVE SOME PIECES MISSING. THE LT ENGINE POWER SECTION WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. PART TC: 3,825.									
3211		GULSTM 112A			GULSTM	SIDE BRACE 453031	CRACKED LT MLG	736	5/3/93 CA930511401
(CAN) LEFT MAIN LANDING GEAR SIDE BRACE FAILED AT UPPER END NEAR ACTUATOR ATTACH POINT.									
5320		GULSTM GA7				DECK 7B105181	CRACKED STA 266 TO 284	8146	4/12/93 CA930415511
(CAN) DECK INSTALLATION FOR RUDDER PULLEY SUPPORT FOUND CRACKED. CRACK 3 INCHES LONG. BRACKET WHICH IS RIVETED TO DECK WAS PARTIALLY DETACHED. PUTTING PRESSURE ON RUDDER CABLE SHOWED SEPARATION BETWEEN BRACKET FOR PULLEY AND DECK INSTALLATION. ACFT TC: 11,093 HOURS.									
5720		MAULE M5210C			MAULE	BRACE 2030B	CRACKED STRUT	1002	3/31/93 CA930331403
(CAN) CRACK FOUND IN COMPRESSION STRUT WHERE BRACKETS ARE WELDED TO STEEL TUBE. THIS STRUT IS LOCATED IN WING BETWEEN FRONT AND REAR SPAR AT WING LIFT ATTACH POINT. WING SPARS OK. PILOT HAD NOTED A BAD LANDING AS POSSIBLE CAUSE. ACFT TT: 1,193 HOURS.									
2750		MAULE M7235	LYC IO540W1A5		MAULE	SET SCREW	LOOSE FLAP HANDLE		4/26/93 CA930510414
(CAN) SET SCREW LOCATED IN FLAP HANDLE - RELEASE BUTTON CAME LOOSE AND ALLOWED THE BUTTON TO FALL OFF. FLAPS COULD NOT BE LOCKED IN POSITION FOR LANDING.									

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3260		MAULE M7235	LYC IO540W1A5			SWITCH	OUT OF ADJUST FLOATS LT GEAR		4/26/93 CA930510413
(CAN) AIRCRAFT ON FLOATS. GEAR SELECTED DOWN, BUT NO LIGHT FOR LT GEAR AND GEAR PUMP LIGHT STAYED ON. MARKERS ON TOP OF FLOAT INDICATED GEAR DOWN OK. MICROSWITCH FOUND OUT OF ADJUSTMENT.									
5711		MOONEY M20E				SPAR 210057	DAMAGED WING CENTER	4103	3/24/93 CA930331418
(CAN) REAR SPAR CARRY THROUGH FOUND DAMAGED AT TOP END OF FLAP TORQUE TUBE MOUNTING BRACKET, AT POSITION WHERE FLAP ACTUATOR ATTACHES TO TORQUE TUBE. SPAR-WEB MISSING A PIECE OF MATERIAL ABOVE UPPER BOLT-HOLE OF BRACKET AS WELL AS CRACKS EXTENDING DOWN. POSSIBLE CAUSES - FLAP POSITION INDICATOR WIRE WAS DISCONNECTED AND FROZEN IN ITS TUBE, OR PERHAPS TOO HIGH SPEED AT FLAP EXTENSION. ACFT TT: 4,294 HOURS.									
7712		MTSBSI MU2B35	GARRTT TPE3316251M		GARRTT 31017262	GEAR SHAFT SPUR 8968042	BROKEN TORQUE SENSOR	3956	3/11/93 CA930322101
(CAN) DURING DESCENT, AIRCRAFT YAWED TO THE LEFT, LOW TORQUE WAS NOTED ON NR 1 ENGINE AND THEN NR 1 ENGINE FLAMED OUT. THE ENGINE WAS SECURED AND A SINGLE ENGINE LANDING WAS CARRIED OUT. THE ENGINE WAS REMOVED FOR INVESTIGATION AND REPAIR. WHEN THE ENGINE GEARBOX WAS OPENED, FOUND THE TORQUE SENSOR HAD A BROKEN GEAR SHAFT. THE SHAFT WAS BROKEN IN THE MIDDLE ADJACENT TO THE WOODRUFF DRIVE KEY SLOT. THE SHAFT WAS RETAINED IN DRIVE GEAR AND CAUSED DAMAGE CONFINED TO THE TORQUE SENSOR.									
2740		PARTEN P68C				CABLE 68530211	BROKEN STABILATOR	783	2/22/93 CA930316602
(CAN) ONE WIRE FOUND BROKEN AT FORWARD PULLEY ON LT FRONT STABILATOR CABLE.									
2750		PIPER PA23250	LYC IO540C4B5		PIPER 1825402	HORN 1642400	CRACKED FLAP	3811	4/8/93 CA930428601
(CAN) AD 81-04-05R1 BEING CARRIED OUT ON FLAP HORN ASSY. CRACK FOUND IN WELD AREA AND ALSO DEEP PITTING. TAPPING WITH SCREW DRIVER COLLAPSED MATERIAL ON BOTH SIDE OF HORN. LIKELY CAUSED BY TRAPPED WATER.									
5312		PIPER PA24250				BULKHEAD 2365602	CRACKED STA 87	3400	3/3/93 CA930324203
(CAN) AT RE-INSTALLATION OF LT SEAT, LT RAIL, THE SCREW AT STA 87 DID NOT THREAD INTO NUT PLATE. FOUND NUT PLATE WAS CRACKED OUT AND MISSING. BULKHEAD REPAIRED AND NUT PLATE INSTALLED. SEAT RAILS HAD BEEN MOUNTED OVER CARPET WITH FOAM BACKING ON CORD-LIKE BASE; THUS, VERY DIFFICULT TO FIRMLY MOUNT SEAT RAILS OVER CARPET, CAN PUT EXCESSIVE STRESS ON NUT PLATE ATTACHMENT AREA. SUBMITTER HAS SEEN AT LEAST ONE OTHER CASE. HE ALSO STATES THIS IS A KNOWN PROBLEM IN "COMMANCHE" COMMUNITY. APPARENTLY FACTORY DRAWING OF SEAT RAIL INSTALLATION DOES NOT INCLUDE CARPETING.									
2810		PIPER PA28151	LYC O360A1A			TANK	LEAKING LT FUEL	5618	3/10/93 CA930318402
(CAN) LT FUEL TANK LEAKING AT ROUNDED CORNER FLANGE, IMMEDIATELY BELOW AFT FUEL OUTLET AND AFT OF QUICK DRAIN. FLANGE COVER WAS SEPARATED ABOUT 2 INCHES, WITH TANK SEALANT HOLDING FUEL IN. SUBMITTER STATED PROBLEM OCCURRED APPARENTLY AS A RESULT OF INTERGRANULAR CORROSION.									
3233		PIPER PA28R200				ACTUATOR 3579702	SEPARATED NLG	7570	3/23/93 CA930415514
(CAN) PILOT HEARD A BANGING NOISE FROM FRONT OF AIRCRAFT, THEN NOSE GEAR LIGHT WENT ON. PILOT LANDED. ACTUATOR FOUND SEPARATED FROM BEARING ASSY LEAVING BEARING BEHIND WITH BOLT AND REMAINED ATTACHED AT FORWARD END OF ACTUATOR. HYDRAULIC LINES OK. THIS INCIDENT SHOWS IMPORTANCE OF HAVING GOOD SPRINGS AT GEARS ALLOWING GEAR TO SWING DOWN AND LOCK ACCORDING TO SUBMITTER.									
2410		PIPER PA31350	LYC TIO540J2BD			BRACKET LW18759	BROKEN ALTERNATOR MOUNT		4/16/93 CA930422202
(CAN) DURING ROUTINE INSPECTION, THE ALTERNATOR IDLER BRACKET WAS FOUND BROKEN, NEAR INBOARD ATTACHMENT POINT.									

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2434		PIPER PA31			PRESTOLITE ALU8421R	BEARING 902014	DESTROYED ALTERNATOR		3/18/93 CA930330204
(CAN) SLIP-RING END BEARING FOUND TOTALLY DESTROYED. THIS CAUSED A MECHANICAL FAILURE AND POWER LOSS. NOT MUCH LUBRICANT FOUND IN BEARING CAVITY. AD 76-02-07 APPLIES ONLY TO ALV SERIES ALTERNATORS.									
2820		PIPER PA31350			AEROQUIP	HOSE 41230006	LEAKING FUEL TO FIREWALL	8500	4/5/93 CA930415518
(CAN) FUEL HOSE FOUND LEAKING AT BEND RADIUS. HOSE DATE IS 6-83 AND HAS BEEN ALMOST 10 YEARS IN SERVICE. SUBMITTER SUGGESTED THIS HOSE SHOULD BE ADDED TO LIFE ITEM LIST OF TWO YEARS MAX. THIS HOSE IN MAIN FUEL FEED TO FIREWALL SHUT-OFF.									
3230		PIPER PA31350				WIRES	BROKEN LT LDG SWITCH	12662	3/18/93 CA930415519
(CAN) LANDING GEAR DID NOT EXTEND. RETRACTION ATTEMPTED AND DOORS WOULD NOT CLOSE. GEAR PUMPED DOWN. BROKEN WIRES FOUND ON LT MICROSWITCH AT TOP OF LT LEG. PARTICLES OF FROST ALSO FOUND UNDER WIRE BUNDLE. AT THE SAME TIME, THE GEAR HYDRAULIC ACTUATOR BEGAN TO LEAK AT SEAL DUE TO CHANGING TEMPERATURE. FROST UNDER SEAL.									
2120		PIPER PA31T	PWA PT6A28		PIPER 4650400	HOSE 499006	DISCONNECTED PRESSURE BLKHD		8/1/92 CA930510409
(CAN) DEPRESSURIZATION IN-FLIGHT. AIR DISTRIBUTION DUCT DISCONNECTED AT FORWARD PRESSURE BULKHEAD. SECOND OCCURRENCE. ALL CLAMPS TENSIONS HAD BEEN VERIFIED AFTER FIRST OCCURRENCE.									
2730		PIPER PA31T2				BUNGEE 819482	WORN ELEV CABLE	4300	4/1/93 CA930510408
(CAN) UP ELEVATOR CABLE BUNGEE OUTER CASING WORN THROUGH BY WASHER INSIDE UNIT.									
3010		PIPER PA31T3	PWA PT6A11			RELAY 159S0011240	BURNT DEICER TIMER		4/5/93 CA930429201
(CAN) ICE NOT SHEDDING. INSP FOUND POWER RELAY BADLY BURNT AND INPUT AND OUTPUT LEADS BURNT AND DISCONNECTED FROM RELAY. RELAY AND OTHER WIRES SEVERELY OVERHEATED. THIRD OCCURRENCE ON THIS AIRCRAFT.									
3232		PIPER PA31T	PWA PT6A28		WIEBEL WTC21141	PISTON 757500	BROKEN LT INB DOOR		2/9/93 CA930510410
(CAN) IN CRUISE, LANDING GEAR TRANSITION RED LIGHT CAME ON. GEAR EXTENDED NORMALLY. LT INBOARD GEAR DOOR ACTUATOR SHAFT FOUND BROKEN NEAR GEAR DOOR ATTACH POINT.									
5280		PIPER PA31T				FORGING 4752932 466522	BROKEN LDG GEAR DOOR	3857	3/15/93 CA930326201
(CAN) GEAR TRANSIT LIGHT STAYED ON. HANDLE DID NOT COME BACK TO NEUTRAL WHEN GEAR SELECTED UP. GEAR CYCLED DOWN NORMALLY. RT FORWARD INBOARD GEAR DOOR HINGE FOUND BROKEN. DOOR WAS PULLED CLOSED BUT DID NOT MAKE SWITCH. HINGE IS POST SB 682 (AD 80-26-05). SUBMITTER SUGGESTED CAUSE MAY HAVE BEEN THAT DOOR WAS RIGGED TOO TIGHT.									
2430		PIPER PA421000	GARRTT TPE33114A		CUTLERHAM	CONTACTOR SM400D24	STUCK LT GEN	2682	10/22/92 CA930511406
(CAN) LEFT ENGINE CRANKING OVER WHEN GPU CONNECTED. LEFT GENERATOR CONTACTOR STUCK IN CLOSED POSITION. PART TC: 3,336.									
3411		PIPER PA46350P				STATIC SYSTEM	FROZEN LINES		1/7/93 CA930430411
(CAN) IN CLIMB AT FL 230 FOR FL 250, AIRSPEED INDICATOR OBVIOUSLY IN ERROR. WITH ATC PERMISSION, STARTED DESCENT AND NOTICED ALTIMETER LAGGING BADLY AND STOPPED AT FL 226 WHILE VSI READING "0". AFTER DESCENDING FOR A WHILE, PILOT WAS REMINDED TO SELECT ALT STATIC AIR AND ON SELECTION, ALTIMETER SPUN DOWN TO 12,000 FEET AND VSI SHOWED MORE THAN 4,000 FPM DOWN. MAINTENANCE FOUND WATER IN STATIC LINES. ALL AIR INSTRUMENTS NEEDED REPAIR OR RECALIBRATION.									

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT)

***** DENOTES SIGNIFICANT OCCURRENCE

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6320		BELL 205A1				MAIN CASE 204040353023	CRACKED M/R XMSN	780	4/6/93 CA930426302
(CAN) TRANSMISSION MAIN CASE CENTERE WEB CRACKED BEYOND LIMITS.									
6410		BELL 205A1				BLADE 212010750009	DELAMINATED T/R	4538	3/15/93 CA930323103
(CAN) AFTER TAKEOFF UNUSUAL NOISE AND VIBRATION. CONTROL NORMAL. INSPECTION REVEALED TAIL ROTOR BLADE SKIN DEBONDED.									
2800		BELL 206L				ACCUMULATOR 6875224	CRACKED FUEL SYS		5/20/93 CA930506601
(CAN) AIRCRAFT DECELERATED TO BELOW NORMAL IDLE (62 PERCENT) TO 50 PERCENT WHEN THROTTLE CHANGED FROM FULL RPM TO GROUND IDLE. A CRACK WAS FOUND IN THE ACCUMULATOR END FITTING.									
5302		BELL 206B				SUPPORT 206033003141	CRACKED TAILBOOM	4582	2/14/93 CA930318516
(CAN) DURING 1,200 HR INSPECTION, A CRACK WAS FOUND AT THE TAILBOOM DOOR. REPAIRED AS PER TB 206-87-122. ACFT TT: 4,894 HOURS.									
5312		BELL 206B				BULKHEAD 206031302183	CRACKED AFT CABIN	4582	2/15/93 CA930318518
(CAN) DURING 1200 HR INSPECTION, A CRACK ON THE AFT CABIN BULKHEAD WAS FOUND, WAS REPAIRED IAW BELL STRUCTURAL REPAIR MANUAL 3.5.3. ACFT TT: 4,894 HOURS.									
5320		BELL 206L				CLIP 206033407119	CRACKED BS 153.79		3/3/93 CA930318601
(CAN) WHILE PERFORMING ASB 206L 87.47, A CRACK WAS NOTICED ON THE CLIP AT BS 153.79. ACFT TT: 11,927 HOURS.									
7230		BELL 206B	ALLSN 250C20			VANE 6877410	FRACTURED COMP 6TH STG	1091	4/11/93 CA930422210
(CAN) HIGH TURBINE OUTLET TEMPERATURE (TOT). COMPRESSOR ROTOR AND CASE INSPECTION REVEALED MISSING 6TH STAGE VANE AND SUBSEQUENT DAMAGE TO OTHER VANES IN THE 6TH STAGE AND DAMAGE TO THE IMPELLER. PART TC: 1,410.									
6720		BOLKMS BO105C				PITCH LINK 10531821	WORN T/R	489	4/9/93 CA930413201
(CAN) PILOT FELT TAIL ROTOR KICK AND SOME VIBRATION. UPON INSPECTION, FORWARD T/R PITCH LINKS OUTER SPHERICAL BEARING HAD SEPARATED FROM BODY OF PITCH LINK. PITCH LINK SEVERELY WORN. BEARING RACE CRACKED.									
7322		BOLKMS BO105C	ALLSN 250C20B			BOOST PUMP D107318D1	SHORTING OUT FUEL SYS		4/6/93 CA930426602
(CAN) PRESSURE FLUCTUATING, CIRCUIT BREAKER TRIPS.									
5610		HUGHES 269C				CANOPY 269A2275907	SHATTERED COCKPIT		3/19/93 CA930408501
(CAN) FOLLOWING CONTACT WITH POWER LINES THE CANOPY SHATTERED, INJURING THE PASSENGER. ACFT TT: 8,065 HOURS.									
6310		HUGHES 269C	LYC HIO360D1A			SPRING ASSY 269A5590007	WORN M/R DRIVE		3/10/93 CA930318514
(CAN) DURING INSPECTION PER AD 93-01-01 OF CLUTCH CONTROL SPRING, THE RETAINER/HOUSING WAS FOUND WORN, POSSIBLY BY CLEVIS PIN.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
7210		HUGHES 369HS	ALLSN 250C20		ALLSN 6877180	GEAR 6889700	WORN GEARBOX	2494	6/20/93 CA930318515
(CAN) CHIP DETECTOR LIGHT CAME ON IN-FLIGHT. INSPECTION FOUND GEAR IN GEARBOX WORN AND FRETTED. GEAR WAS REPLACED. PART TC: 1,152.									
7210		HUGHES 369HS	ALLSN 250C20		ALLSN 6877180	GEAR 6889701	WORN GEARBOX	2494	6/20/93 CA930325701
(CAN) CHIP DETECTOR LIGHT CAME ON IN FLIGHT. INSP FOUND GEAR IN GEARBOX WORN AND FRETTED GEAR WAS REPLACED.									
7320		HUGHES 369HS	ALLSN 250C20			FUEL CONTROL 23034702	STUCK ENGINE	1952	1/10/93 CA930318517
(CAN) FCU INSTALLED FOLLOWING OVERHAUL DURING GROUND RUN AND TESTING, ENGINE WOULD NOT SHUT DOWN. ENGINE STOPPED WHEN FUEL SHUTOFF VALVE CLOSED. FCU SENT BACK TO REPAIR SHOP, NO FAULT FOUND. REINSTALLED FUNCTIONS NORMAL.									
7931		HUGHES 369HE	ALLSN 250C10			TRANSDUCER 15064600132050	SHORTED ENG OIL PRESS		3/16/93 CA930325302
(CAN) DURING PRE-FLIGHT, OIL PRESSURE AT 25 POUNDS WITH ENGINE OFF. INTERNAL SHORT WITHIN TRANSDUCER.									
7322		ROBSIN R22BETA	LYC O320B2C		MARVELSCHEB	CARBURETOR A105217	DEFECTIVE JET TUBE	304	4/7/93 CA930429203
(CAN) ACCELERATION JET TUBE DETACHED FROM VENTURI HOUSING AND FOUND LYING IN THE AIR BOX. IT APPEARED TO HAVE BEEN GLUED TO THE HOUSING.									
7250		SKRSKY S61N	GE CT581401			TURBINE 4002T96P02	EXPLODED NR 2 ENG	5500 450	4/14/93 CA930414101
*****	(CAN) DURING HEAVY LIFT LOGGING, THE NR 2 ENGINE 2ND STAGE TURBINE DISC EXPLODED. THE NR 1 ENGINE DID NOT SUPPLY POWER TO THE ROTOR AND THE HELICOPTER CRASHED AND BURNED.								
2910		SKRSKY S76A				HOSE SS48C2C16500	CHAFED NR 2 HYD SYS	1036	3/10/93 CA930416601
(CAN) WIRE HARNESS P/N 76552-0167-042 CHAFED AND SHORTED AGAINST HYDRAULIC HOSE P/N SS48C2C16500 CAUSING A PINHOLE TO FORM. UNDER PRESSURE, ALL HYDRAULIC FLUID FROM NR 2 SYSTEM WAS DUMPED OVERBOARD.									

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS)

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

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8520		BBAVIA 7ECA	LYC O235C1		LYC	CAMSHAFT 75706	WORN CAM LOBES	1360	1/27/93 CA930510411
(CAN) ENGINE RECEIVED FOR INSPECTION DUE TO PROPELLER STRIKE. DISMANTLING OF ENGINE REVEALED 5 OF 6 CAM LOBES SEVERELY WORN. ENGINE OVERHAULED AND RETURNED TO SERVICE.									
7210		BEECH B100	PWA PT6A28		PWA	GEAR SHAFT 3013880	WORN NP TACH DRIVE	369	1/6/93 CA930324201
(CAN) NP TACHOMETER DRIVE WORN. PART TOTAL CYCLES, 500.									
7314		BEECH 200CBEECH	PWA PT6A42		SUNDSTRANDEM 02532330003	COUPLING J500576V83	STRIPPED FUEL PUMP TO AGB	9853 2454	4/2/93 CA930416405
(CAN) NR 2 ENGINE FLAMED OUT AT FL 100 IN CLIMB. ENGINE FAILED TO RE-LIGHT. MAINTENANCE FOUND THE COUPLING BETWEEN THE HIGH PRESSURE FUEL PUMP AND THE ENGINE AGB STRIPPED. PUMP AND COUPLING REPLACED AND AIRCRAFT RETURNED TO SERVICE. PART TC: 10,474.									
8520		BEECH 65B80	LYC IGSO540A1D			ROD BEARING	WORN NR 4 CYLINDER	400	6/16/93 CA930422205
(CAN) NR 1 ENGINE BEGAN TO RUN ROUGH. FLIGHT CREW REDUCED POWER AND LANDED. INSPECTION FOUND SMALL AMOUNT OF METAL CONTAMINATION IN THE OIL. COMPRESSION TEST FOUND NR 4 CYLINDER LOW. WHEN THE CYLINDER WAS REMOVED THERE WAS EXCESSIVE CLEARANCE IN THE CONNECTING ROD BEARING AND THE CRANKSHAFT END. THE ENGINE WAS REMOVED FOR OVERHAUL.									
8520		BEECH 95B55	CONT IO470L		CONT	CONNECTING ROD 628752	BROKEN NR 1 CYLINDER	1173	4/20/93 CA930510303
(CAN) DURING FLIGHT, PILOT FELT A SLIGHT YAW TO THE RIGHT AND THEN A BANG WAS HEARD. OIL PRESSURE DROPPED OFF. THE ENGINE WAS SECURED AND THE PROPELLER FEATHERED. INVESTIGATION REVEALED A LARGE HOLE IN THE FORWARD END OF THE ENGINE CASE WHERE THE NR 3 CYLINDER CONNECTING ROD HAD COME THROUGH.									
7240		BEECH 99	PWA PT6A20			CASE 3014196	CRACKED GAS GENERATOR	10148 2370	3/30/93 CA930407202
(CAN) DURING INSPECTION A 1.50 INCH CRACK WAS FOUND IN THE GAS GENERATOR CASE. THE CRACK WAS AT THE 3 O'CLOCK POSITION, AT THE FUEL NOZZLE, JUST UNDER THE CASE WELD. THIS AREA WAS INSPECTED 40 HOURS PREVIOUSLY AND NO CRACKS WERE OBSERVED. PART TC: 2,809.									
7230		BELL 206B	ALLSN 250C20			VANE 6877410	FRACTURED COMP 6TH STG	1091	4/11/93 CA930422210
(CAN) HIGH TURBINE OUTLET TEMPERATURE (TOT). COMPRESSOR ROTOR AND CASE INSPECTION REVEALED MISSING 6TH STAGE VANE AND SUBSEQUENT DAMAGE TO OTHER VANES IN THE 6TH STAGE AND DAMAGE TO THE IMPELLER. PART TC: 1,410.									
7322		BOLKMS BO105C	ALLSN 250C20B			BOOST PUMP D107318D1	SHORTING OUT FUEL SYS		4/6/93 CA930426602
(CAN) PRESSURE FLUCTUATING, CIRCUIT BREAKER TRIPS.									
8530		CESSNA 152	LYC O235L2C			CYLINDER	CRACKED NR 4 CYLINDER	1506	4/8/93 CA930422211
(CAN) DURING COMPRESSION CHECK, AIR WAS HEARD LEAKING FROM NR 4 CYLINDER. FURTHER INVESTIGATION REVEALED A CRACK ON THE AFT SIDE OF THE CYLINDER RUNNING FROM THE TOP SPARK PLUG HOLE AROUND TO THE BOTTOM PLUG.									
7414		CESSNA 172M	LYC O320E2D		SLICK 4271	COIL M3525	FAILED MAGNETO	1070	4/12/93 CA930429202
(CAN) LEFT MAGNETO FOUND FAILED DURING GROUND RUN. COIL HAD FAILED.									

**** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

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8530		CESSNA 172G	LYC VO540B1B3			CYLINDER 75172	CRACKED NR 4 CYL RKER	1192 300	5/1/93 CA930511403
(CAN) ENGINE OPERATING NORMALLY. UPON LANDING, OIL LEAK OBSERVED NR 4 CYLINDER. INSPECTION REVEALED A BROKEN ROCKER SHAFT HOUSING (INBOARD) AND A CRACK IN THE OUTBOARD HOUSING.									
8530		CESSNA 172M	LYC O320E2A			CYLINDER 75907	CRACKED NR 3	660	3/31/93 CA930416604
(CAN) DURING INSPECTION, A CRACK WAS DETECTED IN NR 3 CYLINDER. THE CRACK WAS BETWEEN THE COOLING FINS AND RAN FROM THE EXHAUST PORT TO THE SPARK PLUG. THIS IS A CERMICHRONE CYLINDER.									
8530		CESSNA 175	CONT GO300A		CONT	PISTON 626146	FAILED NR 3	482	2/7/93 CA930326204
(CAN) NO INDICATION OF PROBLEM UNTIL ENGINE BEGAN KNOCKING IN-FLIGHT AND OIL PRESSURE DROPPED RAPIDLY. EMERGENCY DESCENT AND LANDING WAS MADE. INSP FOUND EXHAUST TRACKS ON COWLING WERE VERY DARK AND HAD HEAVY OIL CONTENT. INSP ALSO FOUND ALL 6 PISTONS CRACKED WITH NR 3 PISTON HAVING TOTAL FAILURE. NR 3 CONNECTING ROD CAME THROUGH THE TOP OF THE CRANKCASE.									
8520		CESSNA 182A	CONT O470L			BEARING JOURNAL	SPUN CRANKCASE	1216	1/25/93 CA930416401
(CAN) ENGINE RECEIVED FOR OVERHAUL. INSPECTION AFTER DISMANTLING REVEALED NR 3 MAIN BEARING JOURNAL SPUN IN CRANKCASE.									
8530		CESSNA 182D	CONT O470L			GUIDE VALVE	WORN ENG EXH	225	3/18/93 CA930323101
(CAN) ALL EXHAUST VALVES AND GUIDES WORN EXCESSIVELY AND BEYOND LIMITS. ENGINE OIL SCREEN SHOWED TRACES OF MAGNETIC PARTICLES, BUT MAJORITY OF VALVE SHAVINGS WERE LOCATED IN THE BOTTOM OF ROCKER COVERS. LARGE AMOUNT OF ALUMINUM SHAVINGS SHOW PISTON PIN OR POSSIBLE OIL PUMP GEAR FAILURE. RESULTING DAMAGE POSSIBLE CAUSED BY DEFECTIVE CYLINDER ASSEMBLY.									
8520		CESSNA 210A	CONT IO470E			BEARING	WORN NR 2 MAIN	921	3/26/93 CA930407207
(CAN) RECEIVED ENGINE FOR PROPELLER STRIKE INSPECTION. UPON DISASSEMBLY, FOUND NR 2 MAIN BEARING BADLY WORN AND ON THE VERGE OF ROTATING AND CUTTING OFF OIL SUPPLY. CRANKCASE NR2 MAIN BEARING SADDLE WORN/DAMAGED SEVERELY. THIS DAMAGE IS NOT CAUSED BY PROPELLER STRIKE.									
8550		CESSNA 404CESSNA	CONT GTSIO520M		632623A22	VALVE 642336	PITTED OIL PUMP	1612 16	3/18/93 CA930330209
(CAN) IN CRUISE, PILOT NOTED FALLING OIL PRESSURE AND RISING OIL TEMP FROM LT ENGINE. ENGINE SHUTDOWN BY PILOT. OIL PRESSURE RELIEF VALVE FOUND WITH VALVE FACE PITTED. NEW FULL FLOW OIL FILTER ALSO INSTALLED.									
7414		DHAV DHC2MK1	PWA R985AN14B		BOSCH	MAGNETO SB9RU3	WORN ENG LT MAG	669	4/6/93 CA930416404
(CAN) ENGINE RUNNING ROUGH DURING CRUISE. SELECTED LT MAGNETO ENGINE VERY ROUGH. SELECTED RIGHT MAGNETO ENGINE OK. LEFT MAGNETO REMOVED AND INSPECTION FOUND DRIVE GEAR FROM DRIVE SHAFT TO MAGNETO ROTOR - ALL TEETH WORN OFF - RESIDUE IN MAGNETIC. SERVICEABLE MAGNETO INSTALLED.									
7322		DHAV DHC3	PWA R134059		STROMBERGXXX	CARBURETOR NAY9F1	FAILED ENGINE	22	2/23/93 CA930415504
(CAN) DURING ROUTINE PERIODIC INSPECTION OF THE ENGINE WITH BOOST ON, MIXTURE LEVER IN THE IDLE CUT-OFF POSITION, A LARGE AMOUNT OF FUEL WAS OBSERVED COMING FROM THE CARBURETOR INTAKE. THE CARBURETOR WAS REPLACED AND CHECKED SERVICEABLE AND THE AIRCRAFT RETURNED TO SERVICE.									
7320		DHAV DHC6100	PWA PT6A20			FCU ARM	ADJUSTMENT NR 1 POWER LEVER		5/3/93 CA930511102
(CAN) NR 1 POWER LEVER HANGS UP IN IDLE STOP POSITION AND JAMS IN REVERSE. FCU ARM ADJUSTED, FLIGHT IDLE SCREW ADJUSTED.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

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7321		DHAV DHC6300	PWA PT6A27			FUEL CNTL UNIT 25244405	STIFF LT ENGINE		3/22/93 CA930413404
(CAN) ON APPROACH, PROPS SELECTED FULL FINE LT ENGINE UP TO 92 TO 93 PERCENT AND 10 TO 15 POUNDS TORQUE AT FLARE. LEFT ENGINE RAN UP TO 30 POUNDS TORQUE, BETA SELECTED AIRCRAFT SLOWED. POWER LEVERS SELECTED TO IDLE, LT ENGINE WENT BACK UP TO 30 POUNDS TORQUE. LT PROP FEATHERED AND ENGINE WENT DOWN TO NORMAL GAS GENERATOR SPEED.									
7532		DHAV DHC6300	PWA PT6A27		PWA 3029174	O-RING AS3209012	MISSING COMP BLEED VALVE		3/16/93 CA930330201
(CAN) FLUCTUATING TORQUE REPORTED. INSPECTION REVEALED "O" RING FOR THE PISTON SLEEVE OF THE COMPRESSOR BLEED VALVE WAS MISSING, CAUSING PISTON TO SEAT UNEVENLY AND ALLOWING LEAKAGE BY THE VALVE.									
8520		GULSTM 500B	LYC IO540E1A5		LYC	CAMSHAFT LOBE	CRACKED ENGINE	556	5/3/93 CA930503301
(CAN) ENGINE REMOVED FROM AIRCRAFT DUE TO METAL CONTAMINATION. UPON DISASSEMBLY, IT WAS NOTICED THROUGH INSPECTION THAT ALL LOBES ON THE CAMSHAFT WERE CRACKED AND SEVERELY WORN.									
7210		HUGHES 369HS	ALLSN 250C20		ALLSN 6877180	GEAR 6889700	WORN GEARBOX	2494	6/20/93 CA930318515
(CAN) CHIP DETECTOR LIGHT CAME ON IN-FLIGHT. INSPECTION FOUND GEAR IN GEARBOX WORN AND FRETTEED. GEAR WAS REPLACED. PART TC: 1,152.									
7210		HUGHES 369HS	ALLSN 250C20		ALLSN 6877180	GEAR 6889701	WORN GEARBOX	2494	6/20/93 CA930325701
(CAN) CHIP DETECTOR LIGHT CAME ON IN FLIGHT. INSP FOUND GEAR IN GEARBOX WORN AND FRETTEED GEAR WAS REPLACED.									
7320		HUGHES 369HS	ALLSN 250C20			FUEL CONTROL 23034702	STUCK ENGINE	1952	1/10/93 CA930318517
(CAN) FCU INSTALLED FOLLOWING OVERHAUL DURING GROUND RUN AND TESTING, ENGINE WOULD NOT SHUT DOWN. ENGINE STOPPED WHEN FUEL SHUTOFF VALVE CLOSED. FCU SENT BACK TO REPAIR SHOP, NO FAULT FOUND. REINSTALLED FUNCTIONS NORMAL.									
8530		MOONEY M20C	LYC O360A1D			PISTON RING 74241	COLLAPSED NR 2 CYLINDER	11	3/23/93 CA930422215
(CAN) AIRCRAFT LANDED WITH SMOKE COMING FROM THE EXHAUST AND OIL ON THE AIRCRAFT BELLY. INSPECTION FOUND NR 2 CYLINDER PISTON RINGS (P/N'S 74241 AND 73857) COLLAPSED.									
7322		MTSBSI MU2B35	GARRTT TPE3316		WOODWARD	MAIN FUEL CONTRL 89356112	FAILED NR 1 ENGINE	1295	3/19/93 CA930323102
(CAN) WHILE REDUCING POWER ON APPROACH, THE LEFT ENGINE BEGAN TO RAPIDLY INCREASE TORQUE, TEMP, FUEL FLOW AND THE POWER LEVER BECAME INEFFECTIVE IN REDUCING POWER. ENGINE FUEL WAS SHUT OFF AND THE PROP FEATHERED AND A SINGLE ENGINE LANDING WAS CARRIED OUT. INSP FOUND THE FUEL CONTROL DEFECTIVE. THE FUEL CONTROL WAS REPLACED AND THE ENGINE GROUND RUN SERVICEABLE. THE AIRCRAFT RETURNED TO SERVICE.									
7414		PIPER PA18A	LYC O290D2			SEAL	LEAKING MAGNETO RT	71	3/26/93 CA930413411
(CAN) OIL FOUND ON THROTTLE CONTROL CABLE. OIL LEAKING FROM RT MAGNETO BREAKER COVER. BREAKER HOUSING FOUND OIL CONTAMINATED. SEAL LEAKING ALLOWING OIL INTO HOUSING. NO ABNORMAL PROBLEMS NOTED ON MAG CHECK OR ENGINE POWER OUTPUT.									
8520		PIPER PA28R200	LYC IO360C1C			BEARING	DAMAGE CRANKCASE	2403 822	3/1/93 CA930407208
(CAN) RECEIVED ENGINE FOR PROP STRIKE INSPECTION. ON DISASSEMBLY, FOUND NR 2 MAIN BEARING BADLY WORN AND ON THE VERGE OF ROTATING AND CUTTING OFF THE OIL SUPPLY. CRANKCASE NR 2 MAIN BEARING SADDLE WORN/DAMAGED. NR 2 MAIN BEARING REPLACED AND SADDLE REWORKED. THIS DAMAGE IS NOT RELATED TO THE PROP STRIKE.									

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

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8520		PIPER PA31	LYC TIO540A2C		LYC	CRANKCASE LW12030	CRACKED NR 6 CYL AREA	1210	3/30/93 CA930413407
(CAN) SMALL OIL LEAK ON NR 2 ENGINE. INSPECTION REVEALED CRANKCASE CRACK IN AREA OF NR 6 CYLINDER.									
8520		PIPER PA31350	LYC TIO540J2BD			HYD TAPPET 72877	BROKEN NR 3 CYL EXHAUST	1565	4/5/93 CA930427503
(CAN) PILOT REPORTED VIBRATION ON RUDDER PEDALS AND 100 RPM MAG DROP AT 1,800 R.P.M. ON GROUND DIFFERENTIAL PRESSURE CHECK ON NR1 CYLINDER SHOWED "O" PRESSURE. NR 1 CYLINDER FOUND CRACKED. EXHAUST VALVE SEAT LOOSE DUE TO BROKEN TAPPET.									
8530		PIPER PA31350	LYC TIO540J2BD		LYC	STUD 69679	SHEARED NR 3 CYLINDER		4/17/93 CA930510301
(CAN) NR 1 ENGINE BEGAN RUNNING ROUGH IN FLIGHT WITH DROP IN ENGINE PARAMETERS. ENGINE WAS SHUTDOWN AND AIRCRAFT LANDED. GROUND INSPECTION FOUND NR 3 CYLINDER HOLD-DOWN STUDS SHEARED AND A CRANKCASE THROUGH-BOLT BROKEN. CYLINDER HOLD-DOWN STUDS WERE REPLACED AND ENGINE GROUND RUN SERVICEABLE.									
8530		PIPER PA31350	LYC TIO540J2BD		LYC	INDUCTION SEALS 72711	DEFORMED NR 1/6 INTAKE	299	3/10/93 CA930322303
(CAN) NR 1 ENGINE WAS RUNNING ROUGH. MAINTENANCE FOUND THE NR 1 AND NR 6 CYLINDERS INDUCTION PIPE TUBE "O" RING SEALS WERE DEFORMED. THE SEALS BECAME OFFSET, TURBOCHARGER BOOST WAS DELIVERED.									
7230		PIPER PA42	PWA PT6A41			BEARING B1802	SPALLING NR 2 ENG NR 1	2974	4/26/93 CA930511407
(CAN) AT FL 240, SLIGHT OIL SMELL AND SMOKE IN CABIN. WITHIN SECONDS, OIL PRESSURE FLUCTUATION AND MAJOR SMOKE IN CABIN. NR 2 ENGINE WAS SHUTDOWN AND AIRCRAFT LANDED. INITIAL INVESTIGATION REVEALED A MASSIVE AMOUNT OF METAL IN MAIN OIL FILTER, MINOR METAL IN THE FORWARD OIL SCREEN FILTER. NO ILLUMINATION OF CHIP DETECTOR LIGHT. 1/2 QUART OF OIL WITH METAL FLAKES. STRIP REPORT SHOWS SPALLING OF NR 1 BEARING OUTER RACE AND FRACTURE OF COMPRESSOR AIR SEAL ROTOR. SUBMITTER STATED CAUSE NOT DETERMINED. PART TC: 2,525.									
7322		ROBSIN R22BETA	LYC O320B2C		MARVELSCHEB	CARBURETOR A105217	DEFECTIVE JET TUBE	304	4/7/93 CA930429203
(CAN) ACCELERATION JET TUBE DETACHED FROM VENTURI HOUSING AND FOUND LYING IN THE AIR BOX. IT APPEARED TO HAVE BEEN GLUED TO THE HOUSING.									
7261		STBROS SC7SERIES3	GARRTT TPE3312	HARTZL HCB3TN5		BRACKET 8694971	CRACKED L&R OILTANK MT		3/25/93 CA930413410
(CAN) BRACKET FOUND CRACKED ON LT AND RT ENGINE OIL TANK MOUNTS.									
(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)									

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS**3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327**

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3416		BEECH 35C33			NARCO	ENCODER 037530622	MISADJUSTED COCKPIT		4/5/93 CA930422204
(CAN) BLIND ENCODER GROUND CALIBRATION AS PER INSTALL MANUAL DID NOT WORK. CONSIDERABLE DIFFICULTY IN TRYING TO MAINTAIN DATA TRANSITION POINTS WITHIN +/- 125 FEET OF PILOT'S ALTIMETER. APPARENTLY, INSTALL MANUAL ADJUSTMENT LIMITS ARE WRONG.									
3120		CESSNA 152				FUSE 0712031	CORRODED COCKPIT CLOCK	8385	3/23/93 CA930415513
(CAN) CLOCK UNUSABLE. INSPECTION FOUND FUSE AND DIODE ASSY BADLY CORRODED - WIRE BROKEN AND DIODE ALMOST CORRODED OFF. WIRE HAD SHORTED TO GROUND CAUSING MORE DAMAGE. A NUMBER OF OTHER COMPANY AIRCRAFT CHECKED AND FOUND WITH SIMILAR PROBLEM.									
6122		CESSNA 210R		MCAULY D3A34C404		GOVERNOR 290D4FT4	WORN ARM PROP	1926	3/31/93 CA930505401
(CAN) THE ARM SECTION OF THE PROP GOVERNOR WHICH SLIDES INTO THE CONTROL ARM WEARS TO A POINT THAT THE PROP GOVERNOR CONTROL BECOMES EXCESSIVE AND WILL NOT TOUCH THE STOPS. IN SOME CASES, THE WEAR IS SUCH THAT FULL RPM CAN NOT BE REACHED.									
2562		DHAV DHC6200				ELT ELT10	ACTIVATED ON OFF SWITCH		3/18/93 CA930325301
(CAN) CALM AIR INFORMED ELT ACTIVE. BROKEN WIRE ON ON/OFF SWITCH AND PORTABLE ANTENNA INSULATION STRIP OMITTED ON INSTALLATION.									
(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)									

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS

3/8/98 - 3/14/98 ISSUE: 98-11 ZAC-327

ATA OPER	REG. NO SERIAL NO	ACFT MAKE ACFT MODEL	ENG MAKE ENG MDL	PROP MAKE PROP MDL	COMP MFG COMP MDL	PART NAME PART NUMBER	PART COND PART LOC.	TT TSO	DIFF. DATE OPER CONT NO
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(There was no data for this report.)

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS)



U.S. Department
of Transportation
**Federal Aviation
Administration**

SERVICE DIFFICULTY REPORT SUMMARY

GENERAL AVIATION - INDEX



The following information provides a tally of the Service Difficulty Reports (SDR's) contained in this weeks issue of the General Aviation SDR Summary. The totals represent only a summation of the SDR's that were submitted to the FAA, Aviation Data Systems Branch, AFS-620, and processed in time for inclusion in the Summary. The first table is a tally of the number of SDR's submitted through the indicated Flight Standards District Office (FSDO). The second table sorts the SDR's by the aircraft or equipment make and model. The heading at the top of each table provides a two digit Joint Aircraft System/Component (JASC) code grouping (e.g., JASC codes 1100 thru 1800 are represented by the heading labeled 11-18) which categorizes in general, the problem areas for each reported discrepancy.

The Flight Standards Service Difficulty Program objective is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products. This is accomplished by the collection of Service Difficulty and Malfunction or Defect Reports. SDR's are consolidation and collation into common data base where they are analyzed for trends, problems, and alert information. This information is then disseminated to the appropriate segments of the aviation community and to other FAA offices.

The number of SDR's submitted is not an indicator of the mechanical reliability or fitness of an air carrier's aircraft fleet and should not be used as such. The air carriers certificate holding office has the primary responsibility for planning, programming evaluations, and assessing the performance of operators. Questions regarding an air carrier's fleet performance should be directed to the appropriate Flight Standards District Office, Certificate Management Office, or Certificate Management Unit.

GENERAL AVIATION SUMMARY INDEX BY DISTRICT OFFICE**3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327**

DISTRICT OFFICE		SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
AL	03	0	0	6	0	0	1	0	1	8
AL	05	0	0	1	0	0	0	0	0	1
CA		0	38	24	0	24	5	27	18	136
CE	01	0	0	0	0	0	0	1	0	1
EA	03	0	0	1	0	0	0	0	0	1
EA	09	0	0	1	0	0	0	0	0	1
EA	25	0	0	0	0	0	0	1	0	1
EU	01	0	0	0	0	0	1	0	0	1
GL	01	0	0	0	0	0	0	0	1	1
NE	01	0	1	0	0	0	0	0	0	1
NE	05	0	1	0	0	1	0	1	0	3
NM	02	0	0	0	0	0	0	1	0	1
NM	03	0	1	0	0	2	0	0	0	3
NM	07	0	0	1	0	0	0	0	0	1
NM	11	0	0	1	0	0	4	1	0	6
NM	13	0	0	0	0	1	0	0	0	1
SO	15	0	1	0	0	0	0	0	0	1
SO	17	0	0	0	0	0	0	0	1	1
SW	01	0	0	1	0	0	0	0	0	1
SW	03	0	28	42	0	3	62	10	1	146
SW	09	0	0	0	0	0	1	1	0	2
SW	13	0	0	1	0	0	0	0	0	1
WP	03	0	0	0	0	2	0	0	0	2
WP	07	0	0	1	0	0	0	0	0	1
WP	13	0	0	0	0	0	1	0	1	2
WP	17	0	0	0	0	0	0	0	1	1

DISTRICT OFFICE	11-18	21-29	SDR TOTALS BY FAA ATA SYSTEM CHAPTER				71-79	80-85	TOTAL
			30-38	45-49	51-57	61-67			
WP 23	0	0	0	0	0	0	1	0	1
TOTALS	0	70	80	0	33	75	44	24	326

(End of GENERAL AVIATION SUMMARY INDEX by DISTRICT OFFICE Report)

GENERAL AVIATION SUMMARY INDEX by MANUFACTURER MAKE and MODEL**3/8/98 To 3/14/98 ISSUE: 98-11 ZAC-327**

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
AGUSTA	A109A	0	0	0	0	0	0	1	0	1
AGUSTA	A109A2	0	0	0	0	0	0	1	0	1
AIRTRC	AT301	0	0	0	0	0	0	0	1	1
AYRES	S2RNORMAL	0	0	1	0	0	0	0	0	1
BBAVIA	7ECA	0	0	0	0	0	0	0	1	1
BBAVIA	8GCBC	0	6	0	0	2	0	0	0	8
BEECH	200BEECH	0	0	0	0	1	0	0	0	1
BEECH	200CBEECH	0	0	0	0	0	0	1	0	1
BEECH	35C33	0	0	1	0	0	0	0	0	1
BEECH	58P	0	0	0	0	1	0	0	0	1
BEECH	65B80	0	0	0	0	0	0	0	1	1
BEECH	95B55	0	0	0	0	0	0	0	1	1
BEECH	99	0	0	0	0	0	0	1	0	1
BEECH	A100	0	0	2	0	0	0	0	0	2
BEECH	A24R	0	0	0	0	1	0	0	0	1
BEECH	B100	0	0	0	0	0	0	1	0	1
BEECH	B200	0	0	0	0	1	0	0	0	1
BEECH	C90A	0	0	1	0	0	0	1	0	2
BEECH	E18S	0	0	0	0	0	0	0	1	1
BELL	205A1	0	0	0	0	0	1	0	0	1
BELL	205A1	0	0	0	0	0	1	0	0	1
BELL	206B	0	0	0	0	0	0	1	0	1
BELL	206B	0	0	0	0	2	0	0	0	2
BELL	206B3	0	1	3	0	0	1	0	0	5
BELL	206L	0	1	0	0	1	0	0	0	2
BELL	206L1	0	1	9	0	1	3	2	0	16
BELL	206L3	0	0	3	0	0	1	1	1	6

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
BELL	206L4	0	0	0	0	0	3	0	0	3
BELL	212	0	2	0	0	0	1	0	0	3
BELL	212	0	0	0	0	0	1	0	0	1
BELL	214ST	0	7	4	0	0	1	0	0	12
BELL	407	0	0	3	0	0	0	0	0	3
BELL	412	0	7	4	0	1	8	3	0	23
BOLKMS	BK117A3	0	1	0	0	0	0	0	0	1
BOLKMS	BK117A4	0	0	0	0	0	2	0	0	2
BOLKMS	BO105C	0	0	0	0	0	1	1	0	2
BOLKMS	BO105S	0	4	8	0	1	39	2	0	54
CESSNA	140	0	0	0	0	1	0	0	0	1
CESSNA	150B	0	0	0	0	1	0	0	0	1
CESSNA	150L	0	0	0	0	1	0	0	0	1
CESSNA	150M	0	1	0	0	0	0	0	0	1
CESSNA	152	0	0	1	0	0	0	0	1	2
CESSNA	152	0	0	0	0	0	0	1	0	1
CESSNA	170B	0	0	1	0	0	0	0	0	1
CESSNA	172	0	0	0	0	0	0	1	0	1
CESSNA	172G	0	0	0	0	0	0	0	1	1
CESSNA	172M	0	1	0	0	1	0	2	0	4
CESSNA	172M	0	1	1	0	0	0	0	1	3
CESSNA	172P	0	0	1	0	0	0	0	0	1
CESSNA	172Q	0	0	1	0	0	0	0	0	1
CESSNA	172R	0	1	0	0	0	0	0	0	1
CESSNA	175	0	0	0	0	0	0	0	1	1
CESSNA	180A	0	1	0	0	1	0	0	0	2
CESSNA	182A	0	0	0	0	0	0	0	1	1

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
CESSNA	182D	0	0	0	0	0	0	0	1	1
CESSNA	182P	0	0	0	0	1	0	0	0	1
CESSNA	182Q	0	0	0	0	1	0	0	0	1
CESSNA	182R	0	0	1	0	0	0	0	0	1
CESSNA	208B	0	3	0	0	1	0	1	0	5
CESSNA	210A	0	0	0	0	0	0	0	1	1
CESSNA	210D	0	0	1	0	0	0	0	0	1
CESSNA	210L	0	0	0	0	1	0	0	0	1
CESSNA	210L	0	0	1	0	0	0	0	0	1
CESSNA	210R	0	0	0	0	0	1	0	0	1
CESSNA	340A	0	0	0	0	0	0	1	0	1
CESSNA	401	0	0	0	0	1	0	0	0	1
CESSNA	402B	0	0	0	0	0	0	0	1	1
CESSNA	402B	0	2	1	0	0	0	0	0	3
CESSNA	404CESSNA	0	0	1	0	0	0	0	1	2
CESSNA	441	0	0	3	0	0	0	0	0	3
CESSNA	441	0	2	1	0	0	0	0	0	3
CESSNA	500CESSNA	0	1	0	0	0	0	0	0	1
CESSNA	501	0	1	0	0	0	0	0	0	1
CESSNA	525	0	0	0	0	0	0	1	0	1
CESSNA	A185E	0	0	1	0	0	0	0	0	1
CESSNA	A185F	0	3	1	0	0	0	0	0	4
CESSNA	R182	0	0	0	0	0	0	1	0	1
CESSNA	U206	0	0	0	0	1	0	0	0	1
CESSNA	U206F	0	0	1	0	0	0	0	0	1
DHAV	DHC2*	0	0	1	0	0	0	0	0	1
DHAV	DHC2MK1	0	0	0	0	1	0	1	0	2

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
DHAV	DHC3	0	0	2	0	0	0	1	0	3
DHAV	DHC3	0	0	1	0	0	0	0	0	1
DHAV	DHC6	0	1	0	0	0	0	0	0	1
DHAV	DHC6100	0	0	0	0	0	0	1	0	1
DHAV	DHC6200	0	1	0	0	1	0	0	0	2
DHAV	DHC6300	0	1	1	0	0	0	1	0	3
DHAV	DHC6300	0	1	0	0	0	0	2	0	3
DOUG	MD900	0	0	0	0	0	2	1	0	3
GRUMAV	G21A	0	0	0	0	0	0	0	1	1
GULSTM	112A	0	0	1	0	0	0	0	0	1
GULSTM	500B	0	0	0	0	0	0	0	1	1
GULSTM	GA7	0	0	0	0	1	0	0	0	1
HUGHES	269C	0	0	0	0	1	0	0	0	1
HUGHES	269C	0	1	0	0	0	1	0	0	2
HUGHES	369HE	0	0	0	0	0	0	1	0	1
HUGHES	369HS	0	0	0	0	0	0	3	0	3
KAMAN	K1200	0	0	0	0	0	1	0	0	1
MAULE	M5210C	0	0	0	0	1	0	0	0	1
MAULE	M7235	0	1	1	0	0	0	0	0	2
MOONEY	M20C	0	0	0	0	0	0	0	1	1
MOONEY	M20E	0	0	0	0	1	0	0	0	1
MOONEY	M20J	0	0	0	0	0	0	1	0	1
MTSBSI	MU2B35	0	0	0	0	0	0	2	0	2
PARTEN	P68C	0	1	0	0	0	0	0	0	1
PIPER	PA18A	0	0	0	0	0	0	1	0	1
PIPER	PA23160	0	1	0	0	0	0	0	0	1
PIPER	PA23250	0	1	0	0	0	0	0	0	1

AIRCRAFT MAKE	AIRCRAFT MODEL	SDR TOTALS BY FAA ATA SYSTEM CHAPTER								TOTAL
		11-18	21-29	30-38	45-49	51-57	61-67	71-79	80-85	
PIPER	PA24250	0	0	0	0	1	0	0	0	1
PIPER	PA28140	0	0	1	0	0	0	0	0	1
PIPER	PA28151	0	1	0	0	0	0	0	0	1
PIPER	PA28180	0	0	0	0	2	0	0	0	2
PIPER	PA28R200	0	0	1	0	0	0	0	0	1
PIPER	PA28R200	0	0	0	0	0	0	0	1	1
PIPER	PA28RT201T	0	1	0	0	0	0	0	0	1
PIPER	PA31	0	1	0	0	0	0	0	0	1
PIPER	PA31	0	0	0	0	0	0	0	1	1
PIPER	PA31350	0	2	3	0	0	0	0	3	8
PIPER	PA31T	0	1	1	0	0	0	0	0	2
PIPER	PA31T	0	0	0	0	1	0	0	0	1
PIPER	PA31T2	0	1	0	0	0	0	0	0	1
PIPER	PA31T3	0	0	1	0	0	0	0	0	1
PIPER	PA32301	0	0	1	0	0	1	0	0	2
PIPER	PA42	0	0	0	0	0	0	1	0	1
PIPER	PA421000	0	1	0	0	0	0	0	0	1
PIPER	PA44180	0	0	0	0	0	0	0	1	1
PIPER	PA46350P	0	0	1	0	0	0	0	0	1
ROBSIN	R22BETA	0	0	0	0	0	0	1	0	1
SKRSKY	S61N	0	0	0	0	0	0	1	0	1
SKRSKY	S76A	0	5	8	0	0	3	1	0	17
SNIAS	AS350B1	0	0	0	0	0	1	0	0	1
SNIAS	AS350B2	0	1	0	0	0	1	0	0	2
SNIAS	AS350B2	0	0	0	0	0	1	0	0	1
STBROS	SC7SERIES3	0	0	0	0	0	0	1	0	1
TOTALS		0	70	80	0	33	75	44	24	326

(End of AIR CARRIER SUMMARY INDEX by OPERATOR Report)

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

PREFACE

The Joint Aircraft System/Component (JASC) Code Table is a modified version of the Air Transport Association of America (ATA), Specification 100 code. It was developed by the Federal Aviation Administration's (FAA), Aviation Data Systems Branch (AFS-620). Technical support was provided by the Galaxy Scientific Corporation, and various representatives of the air carrier and general aviation community.

Over the past four years, the JASC format of the ATA Spec 100 code has gained widespread industry acceptance. In a harmonized effort, the FAA's counterparts in Australia and Canada have adopted the JASC code with only a few exceptions. Some Canadian aircraft manufacturers have also recently adopted this new standard.

This code table is constructed by using the new JASC four (4) digit code, along with an abbreviated code title. The abbreviated titles have been modified in some cases to clarify the intended use of the accompanying code. This table can be used as a quick reference chart, to assist in the coding and review of aircraft structures or systems data (i.e., Service Difficulty Report (SDR), Accident/Incident Report).

The current coding scheme used in the JASC code was introduced in May 1991, for the technical classification of SDR's. Its predecessor, the FAA aircraft system/component code, was a similar but more complex eight-digit code which was developed over 25 years ago. It was constructed around the computer technology of that period. It consisted of a four digit numerical code plus a four alpha character code to make data retrieval possible. Since that time, computer technology has advanced many fold. Reducing the code from eight to four characters simplifies coding, and in some cases, makes JASC coding match the ATA Specification 100 first three digits, which are used to identify aircraft systems. The ATA code does not reference the fourth digit, so it is free to be used for identifying components.

The JASC code aircraft structural section has increased due to problems inherent with aging aircraft. As an example, FAA code 5301 SXBD was expanded to 20 items due to the high rate of reporting in this area (8021 structural reports were received in 1989). In some instances, there was very little reporting and codes were combined into other systems if the safety impact was not significant. The overall reduction in codes has been from 568 FAA codes to 488 JASC codes, with the significant increase being in the structural area as stated earlier.

The JASC code divides the engine section into two major code groups to separate the turbine and reciprocating engines. The codes for the turbine engines are in JASC Chapter 72, Turbine/Turboprop Engine. The codes for the reciprocating engines are now exclusively found in JASC Chapter 85, Reciprocating Engine.

The other major deviation from ATA Spec 100 is in ATA section 2730, specifically involves the stall warning system. Early technology (primarily on smaller aircraft) directly linked the sensing of flight attitude to one of the components which furnished the means of manually controlling the flight attitude characteristics (elevator). Today, most large transport category aircraft utilize electronic units to sense the change in the environmental condition called stall, and use the data to influence navigation. ATA section 3410, Flight Environment Data, includes high speed warning in its code definition. Stall warning (low speed) is the reciprocal term of high speed warning, so its filing under the same code appears more logical. Thus, with the JASC code it was decided to move the stall warning system to Chapter 34 under the separate code JASC code 3418, Stall Warning System.

The FAA is continuing to pursue worldwide involvement from operators and manufacturers in addressing the need for international standardization of aircraft system/component codes. The ultimate goal is to develop a universal aircraft/component numbering standard which can be used in the manufacturer's maintenance manual, wiring diagram manual, system manuals and illustrated parts catalog. This harmonized standard must be a usable standard for the aircraft manufacturers, air carrier operators and the general aviation community.

We welcome comments and feedback regarding the possible forming of working groups to achieve this long range consideration of possibly harmonizing the ATA Specification 100 code and the JASC code. Comments may be directed to the FAA, Aviation Data Sytem Branch, AFS-620, P.O. Box 25082, Oklahoma City, OK 73125.

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

JASC/ TITLE

11 PLACARDS AND MARKINGS

1100 PLACARDS AND MARKINGS

12 SERVICING

1210 FUEL SERVICING
1220 OIL SERVICING
1230 HYDRAULIC FLUID SERVICING
1240 COOLANT SERVICING

18 HELICOPTER VIBRATION

1800 HELICOPTER VIB/NOISE ANALYSIS
1810 HELICOPTER VIBRATION ANALYSIS
1820 HELICOPTER NOISE ANALYSIS

21 AIR CONDITIONING

2100 AIR CONDITIONING SYSTEM
2110 CABIN COMPRESSOR SYSTEM
2120 AIR DISTRIBUTION SYSTEM
2121 AIR DISTRIBUTION FAN
2130 CABIN PRESSURE CONTROL SYSTEM
2131 CABIN PRESSURE CONTROLLER
2132 CABIN PRESSURE INDICATOR
2133 PRESSURE REGUL/OUTFLOW VALVE
2134 CABIN PRESSURE SENSOR
2140 HEATING SYSTEM
2150 CABIN COOLING SYSTEM
2160 CABIN TEMPERATURE CONTROL SYSTEM
2161 CABIN TEMPERATURE CONTROLLER
2162 CABIN TEMPERATURE INDICATOR
2163 CABIN TEMPERATURE SENSOR
2170 HUMIDITY CONTROL SYSTEM

22 AUTO FLIGHT

2200 AUTO FLIGHT SYSTEM
2210 AUTOPILOT SYSTEM
2211 AUTOPILOT COMPUTER
2212 ALTITUDE CONTROLLER
2213 FLIGHT CONTROLLER
2214 AUTOPILOT TRIM INDICATOR
2215 AUTOPILOT MAIN SERVO
2216 AUTOPILOT TRIM SERVO
2220 SPEED-ATTITUDE CORRECT. SYSTEM
2230 AUTO THROTTLE SYSTEM
2250 AERODYNAMIC LOAD ALLEVIATING

23 COMMUNICATIONS

2300 COMMUNICATIONS SYSTEM
2310 HF COMMUNICATION SYSTEM
2311 UHF COMMUNICATION SYSTEM
2312 VHF COMMUNICATION SYSTEM
2320 DATA TRANSMISSION AUTO CALL
2330 ENTERTAINMENT SYSTEM
2340 INTERPHONE & PA SYSTEM
2350 AUDIO INTEGRATING SYSTEM
2360 STATIC DISCHARGE SYSTEM
2370 AUDIO/VIDEO MONITORING

24 ELECTRICAL POWER

2400 ELECTRICAL POWER SYSTEM
2410 ALTERNATOR-GENERATOR DRIVE
2420 AC GENERATION SYSTEM
2421 AC GENERATOR-ALTERNATOR
2422 AC INVERTER
2423 PHASE ADAPTER

24 ELECTRICAL POWER CONT'D

2424 AC REGULATOR
2425 AC INDICATING SYSTEM
2430 DC GENERATING SYSTEM
2431 BATTERY OVERHEAT WARN. SYSTEM
2432 BATTERY/CHARGER SYSTEM
2433 DC RECTIFIER-CONVERTER
2434 DC GENERATOR-ALTERNATOR
2435 STARTER-GENERATOR
2436 DC REGULATOR
2437 DC INDICATING SYSTEM
2440 EXTERNAL POWER SYSTEM
2450 AC POWER DISTRIBUTION SYSTEM
2460 DC POWER/DISTRIBUTION SYSTEM

25 EQUIPMENT/FURNISHINGS

2500 CABIN EQUIPMENT/FURNISHINGS
2510 FLIGHT COMPARTMENT EQUIPMENT
2520 PASSENGER COMPARTMENT EQUIPMENT
2530 BUFFET/GALLEYS
2540 LAVATORIES
2550 CARGO COMPARTMENTS
2551 AGRICULTURAL SPRAY SYSTEM
2560 EMERGENCY EQUIPMENT
2561 LIFE JACKET
2562 EMERGENCY LOCATOR BEACON
2563 PARACHUTE
2564 LIFE RAFT
2565 ESCAPE SLIDE
2570 ACCESSORY COMPARTMENT
2571 BATTERY BOX STRUCTURE
2572 ELECTRONIC SHELF SECTION

26 FIRE PROTECTION

2600 FIRE PROTECTION SYSTEM
2610 DETECTION SYSTEM
2611 SMOKE DETECTION
2612 FIRE DETECTION
2613 OVERHEAT DETECTION
2620 EXTINGUISHING SYSTEM
2621 FIRE BOTTLE, FIXED
2622 FIRE BOTTLE, PORTABLE

27 FLIGHT CONTROLS

2700 FLIGHT CONTROL SYSTEM
2701 CONTROL COLUMN SECTION
2710 AILERON CONTROL SYSTEM
2711 AILERON TAB CONTROL SYSTEM
2720 RUDDER CONTROL SYSTEM
2721 RUDDER TAB CONTROL SYSTEM
2722 RUDDER ACTUATOR
2730 ELEVATOR CONTROL SYSTEM
2731 ELEVATOR TAB CONTROL SYSTEM
2740 STABILIZER CONTROL SYSTEM
2741 STABILIZER POSITION INDICATING
2742 STABILIZER ACTUATOR
2750 TE FLAP CONTROL SYSTEM
2751 TE FLAP POSITION IND. SYSTEM
2752 TE FLAP ACTUATOR
2760 DRAG CONTROL SYSTEM
2761 DRAG CONTROL ACTUATOR
2770 GUST LOCK/DAMPER SYSTEM
2780 LE FLAP CONTROL SYSTEM
2781 LE FLAP POSITION IND. SYSTEM
2782 LE FLAP ACTUATOR

28 FUEL

2800 AIRCRAFT FUEL SYSTEM
2810 FUEL STORAGE
2820 ACFT FUEL DISTRIB. SYSTEM
2821 ACFT FUEL FILTER/STRAINER
2822 FUEL BOOST PUMP
2823 FUEL SELECTOR/SHUTOFF VALVE
2824 FUEL TRANSFER VALVE
2830 FUEL DUMP SYSTEM
2840 ACFT FUEL INDICATING
2841 FUEL QUANTITY INDICATOR
2842 FUEL QUANTITY SENSOR
2843 FUEL TEMPERATURE INDICATING
2844 FUEL PRESSURE INDICATOR

29 HYDRAULIC POWER

2900 HYDRAULIC POWER SYSTEM
2910 HYDRAULIC, MAIN SYSTEM
2911 HYDRAULIC POWER-ACCUMULATOR-MAIN
2912 HYDRAULIC FILTER-MAIN SYSTEM
2913 HYDRAULIC PUMP. ELECT-ENG.-MAIN
2914 HYDRAULIC HANDPUMP-MAIN
2915 HYDRAULIC PRESSURE RELIEF VLV-MAIN
2916 HYDRAULIC RESERVOIR-MAIN
2917 HYDRAULIC PRESSURE REGULATOR-MAIN
2920 HYDRAULIC, AUXILIARY SYSTEM
2921 HYDRAULIC ACCUMULATOR-AUXILIARY
2922 HYDRAULIC FILTER-AUXILIARY
2923 HYDRAULIC PUMP-AUXILIARY
2925 HYDRAULIC PRESSURE RELIEF-AUXILIARY
2926 HYDRAULIC RESERVOIR-AUXILIARY
2927 HYDRAULIC PRESSURE REGULATOR-AUX.
2930 HYDRAULIC SYSTEM INDICATING
2931 HYDRAULIC PRESSURE INDICATOR
2932 HYDRAULIC PRESSURE SENSOR
2933 HYDRAULIC QUANTITY INDICATOR
2934 HYDRAULIC QUANTITY SENSOR

30 ICE AND RAIN PROTECTION

3000 ICE/RAIN PROTECTION SYSTEM
3010 AIRFOIL ANTI/DE-ICE SYSTEM
3020 AIR INTAKE ANTI/DE-ICE SYSTEM
3030 PITOT/STATIC ANTI-ICE SYSTEM
3040 WINDSHIELD/DOOR RAIN/ICE REMOVAL
3050 ANTENNA/RADOME ANTI-ICE/DE-ICE SYSTEM
3060 PROP/ROTOR ANTI-ICE/DE-ICE SYSTEM
3070 WATER LINE ANTI-ICE SYSTEM
3080 ICE DETECTION

31 INSTRUMENTS

3100 INDICATING/RECORDING SYSTEM
3110 INSTRUMENT PANEL
3120 INDEPENDENT INSTRUMENTS (CLOCK, ETC.)
3130 DATA RECORDERS (FLT/MAINT)
3140 CENTRAL COMPUTERS (EICAS)
3150 CENTRAL WARNING
3160 CENTRAL DISPLAY
3170 AUTOMATIC DATA

32 LANDING GEAR

3200 LANDING GEAR SYSTEM
3201 LANDING GEAR/WHEEL FAIRING
3210 MAIN LANDING GEAR
3211 MAIN LANDING GEAR ATTACH SECTION
3212 EMERGENCY FLOTATION SECTION
3213 MAIN LANDING GEAR STRUT/AXLE/TRUCK
3220 NOSE/TAIL LANDING GEAR
3221 NOSE/TAIL LANDING GEAR ATTACH SECTION
3222 NOSE/TAIL LANDING GEAR STRUT/AXLE
3230 LANDING GEAR RETRACT/EXT. SYSTEM
3231 LANDING GEAR DOOR RETRACT SECTION
3232 LANDING GEAR DOOR ACTUATOR
3233 LANDING GEAR ACTUATOR
3234 LANDING GEAR SELECTOR
3240 LANDING GEAR BRAKE SYSTEM
3241 BRAKE ANTI-SKID SECTION
3242 BRAKE
3243 MASTER CYL/BRAKE VALVE
3244 TIRE
3245 TIRE TUBE
3246 WHEEL/SKI/FLOAT
3250 LANDING GEAR STEERING SYSTEM
3251 STEERING UNIT
3252 SHIMMY DAMPER
3260 LANDING GEAR POSITION & WARNING
3270 AUXILIARY GEAR (TAIL SKID)

33 LIGHTS

3300 LIGHTING SYSTEM
3310 FLIGHT COMPARTMENT LIGHTING
3320 PASSENGER COMPARTMENT LIGHTING
3330 CARGO COMPARTMENT LIGHTING
3340 EXTERIOR LIGHTING
3350 EMERGENCY LIGHTING

34 NAVIGATION

3400 NAVIGATION SYSTEM
3410 FLIGHT ENVIRONMENT DATA
3411 PITOT/STATIC SYSTEM
3412 OUTSIDE AIR TEMP. IND./SENSOR
3413 RATE OF CLIMB INDICATOR
3414 AIRSPEED/MACH INDICATING
3415 HIGH SPEED WARNING
3416 ALTIMETER, BAROMETRIC/ENCODER

34 NAVIGATION CONT'D

3417 AIR DATA COMPUTER
3418 STALL WARNING SYSTEM
3420 ATTITUDE AND DIRECTION DATA SYSTEM
3421 ATTITUDE GYRO & IND. SYSTEM
3422 DIRECTIONAL GYRO & IND. SYSTEM
3423 MAGNETIC COMPASS
3424 TURN & BANK/RATE OF TURN INDICATOR
3425 INTEGRATED FLT. DIRECTOR SYSTEM
3430 LANDING & TAXI AIDS
3431 LOCALIZER/VOR SYSTEM
3432 GLIDE SLOPE SYSTEM
3433 MICROWAVE LANDING SYSTEM
3434 MARKER BEACON SYSTEM
3435 HEADS UP DISPLAY SYSTEM
3436 WIND SHEAR DETECTION SYSTEM
3440 INDEPENDENT POS. DETERMINING SYSTEM
3441 INERTIAL GUIDANCE SYSTEM
3442 WEATHER RADAR SYSTEM
3443 DOPPLER SYSTEM
3444 GROUND PROXIMITY SYSTEM
3445 AIR COLLISION AVOIDANCE SYSTEM (TCAS)
3446 NON RADAR WEATHER SYSTEM
3450 DEPENDENT POSITION DETERMINING SYSTEM
3451 DME/TACAN SYSTEM
3452 ATC TRANSPONDER SYSTEM
3453 LORAN SYSTEM
3454 VOR SYSTEM
3455 ADF SYSTEM
3456 OMEGA NAVIGATION SYSTEM
3457 GLOBAL POSITIONING SYSTEM
3460 FLIGHT MANAGE. COMPUTING SYSTEM

35 OXYGEN

3500 OXYGEN SYSTEM
3510 CREW OXYGEN SYSTEM
3520 PASSENGER OXYGEN SYSTEM
3530 PORTABLE OXYGEN SYSTEM

36 PNEUMATIC

3600 PNEUMATIC SYSTEM
3610 PNEUMATIC DISTRIBUTION SYSTEM
3620 PNEUMATIC INDICATING SYSTEM

37 VACUUM

3700 VACUUM SYSTEM
3710 VACUUM DISTRIBUTION SYSTEM
3720 VACUUM INDICATING SYSTEM

38 WATER/WASTE

3800 WATER & WASTE SYSTEM
3810 POTABLE WATER SYSTEM
3820 WASH WATER SYSTEM
3830 WASTE DISPOSAL SYSTEM
3840 AIR SUPPLY (WATER PRESS. SYSTEM)

45 CENTRAL MAINT. SYSTEM

4500 CENTRAL MAINT. COMPUTER

49 AIRBORNE AUXILIARY POWER

4900 AIRBORNE APU SYSTEM
4910 APU COWLING/CONTAINMENT
4920 APU CORE ENGINE
4930 APU ENGINE FUEL & CONTROL
4940 APU START/IGNITION SYSTEM
4950 APU BLEED AIR SYSTEM
4960 APU CONTROLS
4970 APU INDICATING SYSTEM
4980 APU EXHAUST SYSTEM
4990 APU OIL SYSTEM

51 STANDARD PRACTICES/STRUCTURES

5100 STANDARD PRACTICES/STRUCTURES
5101 AIRCRAFT STRUCTURES
5102 BALLOON REPORTS

52 DOORS

5200 DOORS
5210 PASSENGER/CREW DOORS
5220 EMERGENCY EXIT
5230 CARGO/BAGGAGE DOORS
5240 SERVICE DOORS
5241 GALLEY DOORS
5242 E/E COMPARTMENT DOORS
5243 HYDRAULIC COMPARTMENT DOORS
5244 ACCESSORY COMPARTMENT DOORS
5245 AIR CONDITIONING COMPART. DOORS
5246 FLUID SERVICE DOORS

5247 APU DOORS
5248 TAIL CONE DOORS
5250 FIXED INNER DOORS
5260 ENTRANCE STAIRS
5270 DOOR WARNING SYSTEM
5280 LANDING GEAR DOORS

53 FUSELAGE

5300 FUSELAGE STRUCTURE (GENERAL)
5301 AERIAL TOW EQUIPMENT
5302 ROTORCRAFT TAIL BOOM
5310 FUSELAGE MAIN STRUCTURE
5311 FUSELAGE MAIN FRAME
5312 FUSELAGE MAIN BULKHEAD
5313 FUSELAGE MAIN LONGERON/STRINGER
5314 FUSELAGE MAIN KEEL
5315 FUSELAGE MAIN FLOOR BEAM
5320 FUSELAGE MISCELLANEOUS STRUCTURE
5321 FUSELAGE FLOOR PANEL
5322 FUSELAGE INTERNAL MOUNT STRUCTURE
5323 FUSELAGE INTERNAL STAIRS
5324 FUSELAGE FIXED PARTITIONS
5330 FUSELAGE MAIN PLATE/SKIN
5340 FUSELAGE MAIN ATTACH FITTINGS
5341 WING ATTACH FITTINGS (ON FUSELAGE)
5342 STABILIZER ATTACH FITTINGS
5343 LANDING GEAR ATTACH FITTINGS
5344 FUSELAGE DOOR HINGES
5345 FUSELAGE EQUIPMENT ATTACH FITTINGS
5346 POWERPLANT ATTACH FITTINGS
5347 SEAT/CARGO ATTACH FITTINGS
5350 FUSELAGE AERODYNAMIC FAIRINGS

54 NACELLES/PYLONS

5400 NACELLE/PYLON STRUCTURE
5410 MAIN FRAME (ON NACELLE/PYLON)
5411 FRAME/SPAR/RIB(NACELLE/PYLON)
5412 BULKHEAD/FIREWALL (NAC/PYLON)
5413 LONGERON/STRINGER (NAC/PYLON)
5414 PLATE SKIN (NAC/PYLONS)
5415 ATTACH FITTINGS (NAC/PYLON)

55 STABILIZERS

5500 EMPENNAGE STRUCTURE
5510 HORIZONTAL STABILIZER STRUCTURE
5511 HORIZONTAL STABILIZER SPAR/RIB
5512 HORIZONTAL STABILIZER PLATE/SKIN
5513 HORIZONTAL STABILIZER TAB STRUCTURE
5520 ELEVATOR STRUCTURE

55 STABILIZERS CONT'D

5521 ELEVATOR SPAR/RIB STRUCTURE
5522 ELEVATOR PLATES/SKIN STRUCTURE
5523 ELEVATOR TAB STRUCTURE
5530 VERTICAL STABILIZER STRUCTURE
5531 VERTICAL STABILIZER SPAR/RIB STRUCTURE
5532 VERTICAL STABILIZER PLATES/SKIN
5533 VENTRAL STRUCTURE (ON VERT. STAB)
5540 RUDDER STRUCTURE
5541 RUDDER SPAR/RIB STRUCTURE
5542 RUDDER PLATE/SKIN STRUCTURE
5543 RUDDER TAB STRUCTURE
5550 EMPENNAGE FLT. CONT. ATTACH FITTING
5551 HORIZONTAL STABILIZER ATTACH FITTING
5552 ELEVATOR/TAB ATTACH FITTINGS
5553 VERT. STAB. ATTACH FITTINGS
5554 RUDDER/TAB ATTACH FITTINGS

56 WINDOWS

5600 WINDOW/WINDSHIELD SYSTEM
5610 FLIGHT COMPARTMENT WINDOWS
5620 PASSENGER COMPARTMENT WINDOWS
5630 DOOR WINDOWS
5640 INSPECTION WINDOWS

57 WINGS

5700 WING STRUCTURE
5710 WING MAIN FRAME STRUCTURE
5711 WING SPAR STRUCTURE
5712 WING RIB STRUCTURE
5713 WING LONGERON/STRINGER
5714 WING CENTER BOX
5720 WING MISCELLANEOUS STRUCTURE
5730 WING PLATES/SKINS
5740 WING ATTACH FITTINGS
5741 WING, FUSELAGE ATTACH FITTINGS
5742 WING, NAC/PYLON ATTACH FITTINGS
5743 WING, LANDING GEAR ATTACH FITTINGS
5744 CONTROL SURFACE ATTACH FITTINGS
5750 WING CONTROL SURFACE STRUCTURE
5751 AILERON STRUCTURE
5752 AILERON TAB STRUCTURE
5753 TE FLAP STRUCTURE
5754 LEADING EDGE DEVICE STRUCTURE
5755 SPOILER STRUCTURE

61 PROPELLERS/PROPULSORS

6100 PROPELLER SYSTEM
6110 PROPELLER ASSEMBLY
6111 PROPELLER BLADE SECTION
6112 PROPELLER DE-ICE BOOT SECTION
6113 PROPELLER SPINNER SECTION
6114 PROPELLER HUB SECTION
6120 PROPELLER CONTROL SYSTEM
6121 PROPELLER SYNCHRONIZER SECTION
6122 PROPELLER GOVERNOR
6123 PROPELLER FEATHERING/REVERSING
6130 PROPELLER BRAKING
6140 PROPELLER INDICATING SYSTEM

62 MAIN ROTOR

6200 MAIN ROTOR SYSTEM
6210 MAIN ROTOR BLADES
6220 MAIN ROTOR HEAD
6230 MAIN ROTOR MAST/SWASHPLATE
6240 MAIN ROTOR INDICATING SYSTEM

63 MAIN ROTOR DRIVE

6300 MAIN ROTOR DRIVE SYSTEM
6310 ENGINE/TRANSMISSION COUPLING
6320 MAIN ROTOR GEARBOX
6321 MAIN ROTOR BRAKE
6322 ROTORCRAFT COOLING FAN SYSTEM
6330 MAIN ROTOR TRANSMISSION MOUNT
6340 ROTOR DRIVE INDICATING SYSTEM

64 TAIL ROTOR

6400 TAIL ROTOR SYSTEM
6410 TAIL ROTOR BLADE
6420 TAIL ROTOR HEAD
6440 TAIL ROTOR INDICATING SYSTEM

65 TAIL ROTOR DRIVE

6500 TAIL ROTOR DRIVE SYSTEM
6510 TAIL ROTOR DRIVE SHAFT
6520 TAIL ROTOR GEARBOX
6540 TAIL ROTOR DRIVE INDICATING SYSTEM

67 ROTORS FLIGHT CONTROL

6700 ROTORCRAFT FLIGHT CONTROL
6710 MAIN ROTOR CONTROL
6711 TILT ROTOR FLIGHT CONTROL
6720 TAIL ROTOR CONTROL SYSTEM
6730 ROTORCRAFT SERVO SYSTEM

71 POWERPLANT

7100 POWERPLANT SYSTEM
7110 ENGINE COWLING SYSTEM
7111 COWL FLAP SYSTEM
7112 ENGINE AIR BAFFLE SECTION
7120 ENGINE MOUNT SECTION
7130 ENGINE FIRESEALS
7160 ENGINE AIR INTAKE SYSTEM
7170 ENGINE DRAINS

72 TURBINE/TURBOPROP ENGINE

7200 ENGINE (TURBINE/TURBOPROP)
7210 TURBINE ENGINE REDUCTION GEAR
7220 TURBINE ENGINE AIR INLET SECTION
7230 TURBINE ENGINE COMPRESSOR SECTION
7240 TURBINE ENGINE COMBUSTION SECTION
7250 TURBINE SECTION
7260 TURBINE ENGINE ACCESSORY DRIVE
7261 TURBINE ENGINE OIL SYSTEM
7270 TURBINE ENGINE BYPASS SECTION

73 ENGINE FUEL & CONTROL

7300 ENGINE FUEL & CONTROL
7310 ENGINE FUEL DISTRIBUTION
7311 ENGINE FUEL-OIL COOLER
7312 FUEL HEATER
7313 FUEL INJECTOR NOZZLE
7314 ENGINE FUEL PUMP
7320 FUEL CONTROLLING SYSTEM
7321 FUEL CONTROL/ELECTRONIC
7322 FUEL CONTROL/CARBURETOR
7323 TURBINE GOVERNOR
7324 FUEL DIVIDER
7330 ENGINE FUEL INDICATING SYSTEM
7331 FUEL FLOW INDICATING
7332 FUEL PRESSURE INDICATING
7333 FUEL FLOW SENSOR
7334 FUEL PRESSURE SENSOR

74 IGNITION

7400 IGNITION SYSTEM
7410 IGNITION POWER SUPPLY
7411 LOW TENSION COIL
7412 EXCITER
7413 INDUCTION VIBRATOR
7414 MAGNETO/DISTRIBUTOR
7420 IGNITION HARNESS (DISTRIBUTION)
7421 SPARK PLUG/IGNITER
7430 IGNITION SWITCHING

75 AIR

7500 ENGINE BLEED AIR SYSTEM
7510 ENGINE ANTI-ICING SYSTEM
7520 ENGINE COOLING SYSTEM
7530 COMPRESSOR BLEED CONTROL
7531 COMPRESSOR BLEED GOVERNOR
7532 COMPRESSOR BLEED VALVE
7540 BLEED AIR INDICATING SYSTEM

76 ENGINE CONTROLS

7600 ENGINE CONTROLS
7601 ENGINE SYNCHRONIZING
7602 MIXTURE CONTROL
7603 POWER LEVER
7620 ENGINE EMERGENCY SHUTDOWN SYSTEM

77 ENGINE INDICATING

7700 ENGINE INDICATING SYSTEM
7710 POWER INDICATING SYSTEM
7711 ENGINE PRESSURE RATIO (EPR)
7712 ENGINE BMEP/TORQUE INDICATING
7713 MANIFOLD PRESSURE (MP) INDICATING
7714 ENGINE RPM INDICATING SYSTEM
7720 ENGINE TEMP. INDICATING SYSTEM
7721 CYLINDER HEAD TEMP (CHT) INDICATING
7722 ENG. EGT/TIT INDICATING SYSTEM
7730 ENGINE IGNITION ANALYZER SYSTEM
7731 ENGINE IGNITION ANALYZER
7732 ENGINE VIBRATION ANALYZER
7740 ENGINE INTEGRATED INSTRUMENT SYSTEM

78 ENGINE EXHAUST

7800 ENGINE EXHAUST SYSTEM
7810 ENGINE COLLECTOR/TAILOPIPE/NOZZLE
7820 ENGINE NOISE SUPPRESSOR
7830 THRUST REVERSER

79 ENGINE OIL

7900 ENGINE OIL SYSTEM (AIRFRAME)
7910 ENGINE OIL STORAGE (AIRFRAME)
7920 ENGINE OIL DISTRIBUTION (AIRFRAME)
7921 ENGINE OIL COOLER
7922 ENGINE OIL TEMP. REGULATOR
7923 OIL SHUTOFF VALVE
7930 ENGINE OIL INDICATING SYSTEM
7931 ENGINE OIL PRESSURE
7932 ENGINE OIL QUANTITY
7933 ENGINE OIL TEMPERATURE

80 STARTING

8000 ENGINE STARTING SYSTEM
8010 ENGINE CRANKING
8011 ENGINE STARTER
8012 ENGINE START VALVES/CONTROLS

81 TURBOCHARGING

8100 EXHAUST TURBINE SYSTEM (RECIP)
8110 POWER RECOVERY TURBINE (RECIP)
8120 EXHAUST TURBOCHARGER

82 WATER INJECTION

8200 WATER INJECTION SYSTEM

83 ACCESSORY GEARBOXES

8300 ACCESSORY GEARBOXES

85 RECIPROCATING ENGINE

8500 ENGINE (RECIPROCATING)
8510 RECIPROCATING ENGINE FRONT SECTION
8520 RECIPROCATING ENGINE POWER SECTION

8530 RECIPROCATING ENGINE CYLINDER SECTION
8540 RECIPROCATING ENGINE REAR SECTION
8550 RECIPROCATING ENGINE OIL SYSTEM

MECHANICS CREED

UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a certified mechanic. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge; nor shall I allow any non-certificated superior to persuade me to approve aircraft or equipment as airworthy against my better judgment; nor shall I permit my judgment to be influenced by money or other personal gain; nor shall I pass as airworthy aircraft or equipment about which I am in doubt, either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a certified airman, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation.